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AMERICAN BEE JOURNAL

43d Year. CHICAGO, ILL., JAN. 1, 1903. No. 1.

1. A scene on the Georgetown and Silver Plume Scenic Trip, near Denver.
2. "Umbrella Rock" in the Garden of the Gods, near Pike's Peak.
3. Little Luella Hall and a 12½-pound swarm of bees.
4. Bee-yard of 98 colonies, belonging to F. W. Hall.
5. Home of F. W. Hall, of Sioux Co., Iowa.
6. Carnival Parade Wagon with Honey and Glass Hive of Bees
7. Bird's-eye view of Georgetown, Colo., from the South side.
8. A snap-shot from car window near foot-hills west of Denver.
9. A corner of Central City, Colo.

THE AMERICAN BEE JOURNAL

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EDITOR—George W. York.
DEPT. EDITORS.—Dr. C. C. Miller, E. E. Hasty, Emma M. Wilson.
SPECIAL CORRESPONDENTS—G. M. Doolittle, Prof. A. J. Cook, C. P. Dadant, R. C. Aikin, F. Greiner, A. Getaz, and others.

IMPORTANT NOTICES.

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The National Bee-Keepers' Association.

OBJECTS:

To promote and protect the interests of its members.
To prevent the adulteration of honey.
To prosecute dishonest honey-dealers.

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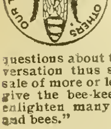
A Celluloid Queen-Button is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-lapel. It often serves to introduce the subject of honey, and frequently leads to a sale.



NOTE.—One reader writes: "I have every reason to believe that it would be a very good idea for every bee-keeper to wear one [of the buttons] as it will cause people to ask questions about the busy bee, and many a conversation thus started would wind up with the sale of more or less honey; at any rate it would give the bee-keeper a superior opportunity to enlighten many a person in regard to honey and bees."

The picture shown herewith is a reproduction of a motto queen-button that we are furnishing to bee-keepers. It has a pin on the underside to fasten it.

Price, by mail, 6 cents; two for 10 cents, or 6 for 25 cents. Send all orders to the office of the American Bee Journal.

Forty Years Among the Bees

By DR. C. C. MILLER.

DR. C. C. MILLER.

The above is the title, and name of the author, of a new bee-book which will be ready some time in January, 1903, as it is now in the hands of the printers. It is a book that every bee-keeper in the world that can read English will want to own and read. It will contain over 300 pages, be bound in handsome cloth, printed on good book-paper, and illustrated with over 100 beautiful original half-tone pictures, taken by Dr. Miller himself. The book will show in detail how Dr. Miller does things with bees.

The first few pages of the new book are devoted to an interesting biographical sketch of Dr. Miller, which finally tells how he happened to get into bee-keeping. Seventeen years ago he wrote a small book, called, "A Year Among the Bees," but that little work has been out of print for a number of years. While some of the matter used in the former book is found in the new one, it all reads like a good new story of successful bee-keeping by one of the masters.

How to Get a copy of Dr. Miller's "Forty Years Among the Bees."

The price of this new book is $1.00, postpaid; or, if taken with the WEEKLY **American Bee Journal** for one year, BOTH will be sent for $1.75.

Or, any present regular subscriber to the American Bee Journal whose subscription is paid in advance, can have a copy of Dr. Miller's new book *free as a premium* for sending us **Two New Subscribers** to the Bee Journal for one year with $2.00. This is a magnificent offer. Better send in the new subscriptions before Jan. 1, so they can begin with the new year. Or, if sent at once, we will throw in the rest of this year's numbers of the Bee Journal free to the new subscribers.

GEORGE W. YORK & CO.,
144 & 146 East Erie Street, CHICAGO, ILL.

AMERICAN
ESTABLISHT IN 1861
THE OLDEST BEE-PAPER IN AMERICA
BEE JOURNAL

43d YEAR. CHICAGO, ILL., JAN. 1, 1903. No. 1.

Editorial Comments.

A Happy New Year to all the readers of the old American Bee Journal is our sincerest wish. May it also be, in every way, the very best year of all the years you have seen.

Crediting New Queens Fairly.—In a thoughtful article in the American Bee-Keeper, Arthur C. Miller calls attention to the impropriety of giving credit or blame to a queen for the success or failure of a colony during the first year of her introduction. Even if a queen were introduced as early as May 1, and 60 days be allowed as the average life of a worker, "it will readily be seen that from a third to a half of the crop is all that should be credited to the new blood." If Mr. Miller has made any error in his estimate, it is probably on the side of allowing the new queen more than her proper share of influence upon the crop.

A Canadian Honey Exchange.—Mr. Morley Pettit informs us that at Barrie, Ont., Dec. 18. 1902, a number of bee-men of the Province met to organize a honey exchange. W. A. Chrysler was appointed chairman, and Morley Pettit secretary, *pro tem*. The Association is to be called "The Canadian Honey Exchange," and the following officers were elected:

Directors—C. W. Post, W. A. Chrysler, Jno. Newton, and H. G. Sibbald.

Officers—President, H. G. Sibbald; Vice-President, W. A. Chrysler; and Secretary-Treasurer, Wm. Couse.

The membership fee is $1.00.

We wish the new organization every success. And congratulate them on getting ahead of the United States bee-keepers. But the latter will catch up later on. Large bodies move in a less rapid manner.

Bogie Man for Vicious Bees.—In the British Bee Journal there was a case reported in which some vicious bees vented their spite upon a scarecrow or dummy dressed in a man's clothes. The cross bees appeared to leave their stings in the bogie man, and there was no trouble from them afterward. One of the leading contributors of the Journal, D. M. M., thinks the bogie man might do good by familiarizing the bees with the presence of something in the semblance of a man, but seems to feel almost positive that there was some mistake about the bees stinging the bogie man, arguing that bees are so discriminating that they do not sting inanimate objects, and that if it should sting anything like a felt hat there would be no loss of the sting, which would be safely withdrawn by the rotary motion of the bee. However, it may be in England, "in this locality" cross bees will attack a felt hat by the hundred, leaving the hat well spotted with stings that they have failed to withdraw.

Liquefying Honey in Small Packages.—One way that has been recommended is to set a case of small glass or tin packages in the oven of a cook-stove, or in some similar place, and allow gradual heat to bring the granulated honey to a liquid condition. Mr. Greiner says in the American Bee-Keeper that he has had very satisfactory results from using a solar extractor whenever there is sufficient sunshine.

Box-Hives are favored by a correspondent in the Farm, Bee, and Poultry Review, who says "it is the hive in most general use, and in the hands of an expert it is a good hive; for a brood-chamber I would ask for nothing better;" and Editor Colbourne adds, "I, too, am using a few box-hives for brood-chambers, and find that I get the best results from them."

Australia must be different from "this locality." The probability is that most bee-keepers in this country have not for years seen a box-hive with bees in it. What one would do "in the hands of an expert" of the present day can not be told, for the probability is that no expert would have one.

Proportion of Honey to Wax.—F. Greiner says in the American Bee-Keeper that he once melted 27 sections and obtained 12½ ounces of wax. If we assume that those 27 sections contained 25 pounds of honey, that would mean that it takes a pound of wax to contain 32 pounds of honey, or that it takes one-half ounce of wax to contain a pound of honey.

Shall the National Do Marketing?—There is in progress a healthy growth in the feeling that it is important for bee-keepers to unite and organize for various purposes, and gradually there will come crystallization of thought as to the best things to be done, and the best way of doing them. Not of the least importance is the matter of marketing honey. Shall the National Bee-Keepers' Association take hold of the matter directly without aid from any other quarter? Shall the National have nothing to do with it, and a separate organization be established? Shall a partially separate organization be formed, the two co-operating? These and other questions are open for consideration, and careful thought should be given them. The following, bearing directly upon the subject, is from an editorial in Gleanings in Bee-Culture:

> Whether or not the National Bee-Keepers' Association should establish warehouses at various points is a question. The Association, as now organized, could not very well undertake a work of this kind; and it is doubtful in my mind whether it should do so; but it might work in harmony with another organization kindred to it. For example, the bee-keepers of Colorado have what is called the Colorado State Bee-Keepers' Association—an organization that has for its object the holding of conventions at certain seasons of the year. Then they have also another allied to the first one, known as the Colorado Honey-Producers' Association, which has for its object the receiving of the crop of the members and placing it on the market to be sold when the

market reaches its highest notch in the mind of an expert employed by the Association.

I remember it has happened several times that a buyer has gone through Colorado attempting to break down the market established by the Association. In vain did he try to get honey at less than the ruling prices; for so well were the Colorado bee-keepers organized that he went back home almost empty-handed, and finally had to pay the price simply because the bee-keepers of Colorado were so well organized that one central head controlled the price demanded, and, of course, obtained it—not only for one man's crop, but for all the members who put their honey into the hands of the central organization.

It is possible, then, that the National Bee-Keepers' Association might be affiliated with and indirectly connected with another organization which could take care of the commercial interests of bee-keepers, the same to receive their crops, properly grade them, and then dispose of the product after the market has been cornered, at a price that is not exorbitant, but which would give bee-keepers a fair living profit on the investment.

Editor Morehouse, of the Rocky Mountain Bee Journal, seems to hold much the same view, saying:

> The National occupies a peculiar field, and serves a general purpose that does not come within the scope of an organization whose specific office is to market the products of its members. There is plenty of work for both a national bee-keepers' association and a national honey-producers' association, and while the membership in each may be nearly identical, we feel that bee-keeping interests, in general, will be better served by keeping them distinct as organizations.

We are quite in accord with the idea that the National Bee-Keepers' Association is not organized for the purpose of marketing the honey product of its members. A distinct and separate national company or organization should be formed for that purpose. This will be done, we think, if ever anything worth while is accomplished in the direction contemplated. The National can help greatly in getting the new organization started, we believe.

Next week we hope to have more to say on this subject, when we expect to publish a splendid article by Prof. A. J. Cook, that we have had for some time, waiting until after we had published that part of the Denver convention report which appears this week.

✻ The Weekly Budget. ✻

SYMPATHY FOR DR. MASON'S FAMILY.—Mr. G. W. Vangundy, of Uinta Co., Utah, writes us as follows:

> I am sorry to hear of the death of Father Mason. There are nine members of the National Bee-Keepers' Association here, and we all join with you in extending sincere sympathy to the bereaved family in their untimely loss. There are five or six of the Valley bee-keepers that are not members of the National Association, who unite with us in sending respects to the family of Father Mason.
>
> G. W. VANGUNDY.

MR. F. W. HALL, of Sioux Co., Iowa, whose pictures appear on the first page of this number, wrote us as follows some time ago:

> FRIEND YORK:—When we read your notes concerning the Denver convention and your several side-trips, it made us feel badly that we had to come home before ascending to the summit of Pike's Peak; however, the altitude at Silver Plume was about as much as my wife could stand. We felt sorry to have missed going to church and Sunday-school along with you at Colorado Springs; although my wife was very tired and felt quite poorly at the time, I was mainly to blame for not having gone.
>
> I have quite a number of snap-shots of the scenery taken at various places through Colorado, which I will send to you when I have had more time to print them. You will remember the "burro" at the beginning of the "Rockies," on the "Loop" trip; well, I have one of those finished, and one a little way from Central City, and one of Georgetown, on the same trip. I will send them to you now, and the others after I get them ready. F. W. HALL.

Mr. Hall finally finished up the pictures, and we have put some of them into the group as they are on the first page. Nearly all of the Colorado ones were taken while the cars were in motion. Some of them will doubtless be appreciated more by those who were privileged to take some of the side-trips after the convention.

In reference to the picture (No. 4) showing Mr. Hall's home apiary, he says:

> As you will see, it was taken in two exposures, and the two prints fitted together as nearly as could be. The house on the left is a neighbor's across the alley. The top of our kitchen chimney shows slightly, the view being gotten from the roof of the dwelling. The feeder, as described to you in my former letter [see page 812], shows in the foreground at the right. Only one feeding-board was in operation at that time. It was necessary to add two more such, making three feeding-boards besides the lower trough, in order to give ample room for the bees to feed without too much crowding. F. W. H.

THE ONTARIO BEE-KEEPERS' ASSOCIATION.—Mr. Morley Pettit sent us the following on Dec. 23, in reference to the Ontario convention:

> Representative bee-men from all parts of the Province met at Barrie, Ont., to attend the annual convention of the Ontario Bee-Keepers' Convention, Dec. 16, 17 and 18, 1902. Pres. J. D. Evans occupied the chair. Among those present were Prof. Creelman, B. S. A., superintendent of Farmers' Institutes; Prof. Frank T. Shutt, M. G. F. I. C. chemist; Mr. Jno. Fixter, apiarist, Dominion Experimental Farm, Ottawa; and Wm. McEvoy, Provincial Inspector of Apiaries for Ontario. The discussions were principally along the line of advancement in business methods, more systematic reporting of the honey crop for mutual benefit, and the formation of a honey exchange.
>
> The officers for 1903 are: President, W. A. Chrysler; Vice-Presidents, J. W. Sparling and H. G. Sibbald; Secretary, Wm. Couse, of Streetsville; Treasurer, M. Emigh; Inspector of Apiaries, Wm. McEvoy, of Woodburn; Assistant Inspector, F. A. Gemmill, of Stratford.
>
> Next place of meeting, Trenton, Ont.

Why Not Help a Little—both your neighbor bee-keepers and the old American Bee Journal—by sending to us the names and addresses of such as you may know do not now get this journal? We will be glad to send them sample copies, so that they may become acquainted with the paper, and subscribe for it, thus putting themselves in the line of success with bees. Perhaps you can get them to subscribe, send in their dollars, and secure for your trouble some of the premiums we are constantly offering as rewards for such effort.

Convention Proceedings.

Report of the Utah Bee-Keepers' Convention.

The little busy bee, and how to make it improve each shining hour to the fullest extent, formed the theme of several interesting discussions at the recent annual meeting of the State Bee-Keepers' Association held in Salt Lake City. It was generally agreed that the production of honey, in Utah, is a pleasant and profitable occupation, when right methods are used.

Pres. E. S. Lovesy gave an interesting account of the recent National Bee-Keepers' Convention in Denver, which he and some others attended. They worked among the delegates to have the next convention held in Salt Lake City, and he thought their efforts may be successful. Favorable comments were indulged in on the subject by many of the bee-keepers present, after which a resolution was offered, and unanimously adopted, instructing the President and Secretary to send a special and urgent invitation to the Executive Committee of the National organization to hold the next convention in Salt Lake City.

Judge J. L. Bunting gave an interesting account of the industry in the southwestern part of the State. He said the bee-keepers in that section had obtained over an average yield this season.

Frederick Dart and Vice-President R. S. Rhee, of Weber county, gave interesting sketches in regard to the progress in their localities. Mr. Rhees has over 100 colonies, and he disposed of his products at profitable figures.

In the general discussion it was shown that with the exception of those places where drouth, grasshoppers or smelter-smoke prevailed, the bee-keepers have obtained from a fair to a good crop of honey throughout the State. It is hoped that the smelter-smoke problem will soon be settled by the use of smoke-consumers.

Of interest to the housekeepers was the assertion of Mrs. Mary A. Sorenson, that she has used honey to good advantage as a substitute for sugar, in putting up fruit.

As illustrative of the possibilities in bee-keeping, Mr. F. W. Young cited a case of a man in his neighborhood who had 8 colonies of bees from which, in one season, he extracted an average of 300 pounds of honey from each, besides having several new swarms.

J. B. Fagg, the regular Secretary, being absent in Europe, J. N. Elliott was chosen to fill the position. A resolution was passed thanking Secretary Fagg for his long and faithful service in the interest of the Association, and also delegated him to represent the Utah Bee-Keepers' Association in England during his sojourn there.

Among the bee-keepers present who took part in the discussions were the following: Judge J. L. Bunting, Frederick Dart, Vice-Pres. R. T. Rhees, Fred Schach, Mrs. Mary A. Sorenson, F. W. Young, N. D. Jenson, N. C. Jensen, T. N. Elliott, Mr. Woodbury, of southern Nevada, and others.

President Lovesy's Address.

I am pleased to meet our bee-keepers, under fairly favorable conditions at this time. While owing to the drouth and grasshoppers in some localities some of our bee-keepers have not obtained a full crop the past season, from reliable reports obtained from nearly all over the State we note that the average crop of bee-products in Utah has been equal to those of any other State, the average flow as reported ranging from 50 to 300 pounds. Some wrote that it was the most prosperous season they have had in from 3 to 5 years. In many localities the high-grade product itself is proof of the excellent flow. We took some samples of honey on our late visit to the National Bee-Keepers' Convention in Denver. Some of it was equal, if not superior, to anything in the convention samples. It was presented to the Governor and other prominent Colorado citizens. Had we thought of coming out on top we would have taken more of it. We were treated so grandly by our Colorado and Eastern bee-keeping friends that we will ever look back to this trip as one of the most pleasant events of our lives. There were 6 Utah bee-keepers at the convention, and all enjoyed their trip.

We gave the Association a hearty invitation to hold their convention in Salt Lake City, in 1903, and if they accept we will try, as far as our feeble efforts will prevail, to make their visit as pleasant and agreeable as ours was while in Denver. We believe that if our bee-keepers take sufficient interest in this matter, the Association can be induced to come here; besides, everybody wants to make one or more visits to Salt Lake City, and as the great Irrigation Congress will be held here about the middle of September, 1903, the rates will be low, and we can conceive of no reason why our bee-keeping friends should not meet with us. As very few of the prominent bee-keepers of the Association have ever visited Salt Lake City, we hope they will not miss this opportunity.

As the question of a stronger organization is the order of the time, we hope our bee-keepers will make an effort to get into line. There is great need of improvement, especially in collecting information as to the amount of bee-products produced through the country each year, and how to obtain reasonable prices. To begin with, as many of our bee-keepers have obtained a fairly good crop, they must not rush it on an overstocked home market, at any price.

Our Secretary, Mr. J. B. Fagg, has left for Europe, where he will travel for two years, and will represent the Utah Bee-Keepers' Association while there. It will be necessary to elect another Secretary to fill the unexpired term. Our long association has been pleasant and agreeable, and while I regret his absence I wish him a pleasant journey and a safe return. E. S. LOVESY.

THE DENVER CONVENTION.

Report of the Proceedings of the 33d Annual Convention of the National Bee-Keepers' Association, held in Denver, Col., on Wednesday, Thursday and Friday, Sept. 3, 4 and 5, 1902.

(Continued from page 822.)

Vice-Pres. Harris—Can any member inform me where Mr. McIntyre's paper is, or whether there is one present? It was not read, and I see it was on the program for this morning. It is a little out of the regular order, but if there is no objection our good-looking Secretary will read the paper.

Dr. Mason—Do you mean me?

Vice-Pres. Harris—Yes, I mean you.

Dr. Mason—I thought the remarks of Mr. Harris would let me out when he said "good looking." You don't want to "put you foot in it" that way.

Dr. Mason then read the following paper prepared by J. F. McIntyre, of California, on

"SELLING EXTRACTED HONEY AT WHOLESALE; HOW TO GET THE BEST PRICES."

The statement that "to him that hath shall be given," etc., still holds good, only it should be made plainer. To him that hath *money* shall be given a high price for his produce, and from him that hath not money his produce shall be taken at a very low price, is the saying up-to-date. I believe that this law is as inexorable as Fate, when the words "at wholesale" govern what is said. A poor bee-keeper could peddle his honey, selling directly to consumers who do not know his weakness, at a good price, but the large producer can not do this; his honey must pass through several hands before reaching the consumer, and the price is governed by the market.

It is said, "All things come to him who can wait." Ah! there is the rub. How *can* a man wait who has hungry mouths to fill, and interest gnawing at his vitals?

I have before me San Francisco's Prices Current of July 4, 1902. Under Honey it says, "Buyers and sellers are too far apart in their ideas of values for much trading." Do you know what that means? It means that those having honey to sell now in California can *wait*. If there was one man who could *not* wait the buyers would get his honey at the present low price.

I don't know a single neighbor bee-keeper that has his last year's honey crop now on hand; they have all sold at a low price to speculators. Only a small portion of their honey has reached the consumer; the balance is in the hands of strong men who bought at a low price and are holding for a high price.

At our conventions this is often asked, "What are we going to do with the small producer who is too weak to hold his honey, and breaks the market?" I always look at the questioner to see if he wants to *kill* the small producer, let the speculators eat him up, or *organize* him. The question has never been answered to the satisfaction of every one present, but nearly all seem to feel as if the man had done *wrong* by selling so *cheap*.

The big-hearted man, with the love of humanity thrilling in his breast, gets up and says, "We really must organize these poor fellows so they will be able to hold their honey for a better price." The stoic gets up and asks "how much longer 100 of them would hold out than one, if they were all in the same fix and *must have money?*" The dealers would laugh at such a weak corner on honey as that, and wait a very short time until it went to pieces. The "bulls" must have *real strength;* bellowing and pawing the dust does not scare the "bears" very much, so the organization fails to make its corner effective, the officers are blamed, and things are in worse shape than they were before.

Is there no hope, then, for the man who is too weak to hold his crop? Yes, there is still hope. The citrus fruit-growers have done much to solve the problem. Their product was perishable, and could not be held, no matter how much money they had. Their business got into such bad shape that they were receiving expense bills instead of returns for car-loads of oranges shipped East. They had to do something or quit the business, and they did it. They organized to sell their fruit and get honest returns. They placed agents, under bonds, in every large city in the United States. These agents kept the head office in Los Angeles posted. Eleven million dollars worth is now consigned to these agents annually, and honest returns are made to the producer, and the acreage of citrus fruits has doubled instead of declining.

This organization, known as the Southern California Fruit Exchange, has become so successful that the members have all become co-operative cranks, and now propose to give other producers, who are too weak to maintain agencies of their own, the benefit of their agencies to sell their products.

The weak bee-keepers in this "neck of the woods" may now organize and market their honey at any time of the year through these agencies. The producers are finding out that the consumers are paying a good price for all the honey they use. The speculator, who is always a "bear" to the producer and a "bull" to the consumer, has overreached himself, and the bee-keepers now have an avenue through which they may market their honey without letting it pass through his hands. J. F. McIntyre.

Owing to the absence of Mr. T. Lytle, of Colorado, Mr. Harris called upon Mr. George W. York, who read Mr. Lytle's response as follows:

SELLING EXTRACTED HONEY AT WHOLESALE; HOW TO GET THE BEST PRICES.

The best prices for extracted honey—and the same might be said of comb honey also—will only be obtained when bee-keepers realize that modern, up-to-date business methods in production, transportation, distribution and selling, such as are sucessfully applied to other lines of industry, must be adopted and strictly followed.

Let us take as an example the citrus fruit industry so well brought to your attention by the paper just read. From very small beginnings, in the face of great obstacles, and without precedents, a great business has been established, placing these fruits in every city, town, and even village, of our broad land, tempting the buyer and profiting the grower. Many other business enterprises are following the same paths with equal success; the road, therefore, may be said to be well defined and traveled.

The obstacles, as I see them, are, first, a failure on the part of most bee-keepers to produce a thoroughly well-ripened honey, extracted or comb. Poo-hoo as much as you please, honey is not at its best for table use, if indeed for any other, when taken from the hive as soon as gathered. It lacks the aroma, the rich mellowness of well hive-ripened honey, and fails to please the taste, to make the continual consumer that the well-taken article does. Cleanliness and good surroundings at the bee-yard will not force the taking of honey as soon as stored, and an experience of over 20 years without one failure to get above the ruling prices, confirms me in my opinions. I continue in the same markets, my honey is known, and sells in preference, and if true of comb honey it must be more true of extracted honey, so generally taken before ripe, and necessarily lacking in the points I have mentioned. I believe these things are as true, though perhaps in a slightly lessened degree, equally in the irrigated districts with the rain-belts, the irrigated areas having the advantage of a dryer atmosphere to keep it good after removal from the hive. I believe that those who maintain other views have never fairly tried to produce the *best*; and I have met quite a number who would not put on their own table that which they sent to market, preferring the better-ripened article.

Second, every distinct brand of honey should be properly and plainly labeled. Many a person will eat either a sage, alfalfa, basswood or buckwheat honey continuously, who would not care for the other brands, and it is poor business that fails to let one have that which he desires.

Of course, labeling presupposes a suitable package for the consumer, and all such packages, if handled by an agency such as the fruit-men have, should be of uniform and suitable size, and should bear the guarantee of such agency. One can easily see an orange or apple—every one knows what they are. How many really do not know the *taste*, even, of good honey, and yet buy poor and dangerous sweets just because they are constantly before them in the stores. Selling through one great agency, the demon of adulteration could be much better fought, and, cost what it may, this fight should be to a finish.

Let me heartily commend the matters brought to your attention by the paper to which I respond. Like a good, sturdy guide-post it points To SUCCESS [illegible]. In my opinion, nothing else that the National can do could in any way compare with making plans for such handling of our product, either by this agency or some other equally well equipped. But it must be *one* agency, all others must be merged, or quit. Competition and failure we have. Let us try to get into real business methods. T. Lytle.

F. E. Brown—I think that this is perhaps the important question, and I am very glad indeed that this thing has been sprung, and that we have these two papers dealing with the marketing of our honey in a wholesale way. We have listened to people from Colorado and other places wherein they produce their honey and sell it to consumers, but in California and other places we do not produce our honey, do it up and sell it; there is very little honey consumed in the State of California, and, perhaps, in other States where they produce large quantities. Our honey all seeks a market in a wholesale way, and the question is as to how we can derive the best results. We have before us such as the Citrus Fruit Growers' Association and the Raisin Growers' Association, which are examples indeed worthy for us to follow. A few years ago the raisin-growers of California associated together in order that they might maintain prices. Before that the growers were digging up their vines by the acre because it was not profitable to grow raisins; now the Raisin Growers' Association has placed it upon a paying basis; the same way with oranges—the orange growers in California maintain a price by which it is a profitable business. When I buy oranges in my own State I pay from 20 to 40 cents a dozen, the same price you pay here in Denver. When our honey seeks the same channels we will achieve the same results: and it seems to me this question should be agitated through our journals, in all assemblies, and in every way by which it is possible to get this before our people, in order that we may have our honey placed upon a profitable and substantial basis by which we may receive the actual value of the goods.

Dr. Mason—For the first five years that I was secretary, at every convention we had a paper on co-operation in some way or other, and some of us thought that was an important subject, and now we have a great question ahead of us, and it will be well now if we could do something definitely. It always does well to talk, but you can't accomplish anything by talking; you have to devise ways and means. Now, if Mr. Brown could tell us what we, as the National Association, ought to do, we would have something to work upon. Make it brief and to the point, and it will be just a great, big step in advance of where we have been. It seems as if it would be a proper thing for the National Association to take hold of this thing, and get it in shape. Of course, it will take time.

Mr. Brown—Of course, I could not tell you exactly how this thing should be; it is a deep question, it is a question that involves hundreds and thousands of dollars, but if the National Association would take hold of the selling of the honey, then I would have confidence to place my crop in the hands of the National Association where I would not in any local organization. To illustrate that, in central California I am the Business Manager of the Central California Bee-Keepers' Association; they voted me that position and placed their honey in my hands, that I might put it upon the market in a wholesale way for sale. They have confidence in me simply because they know me, but we can not expect to know individuals or certain salesmen, commission merchants, and so on, sufficiently to have confidence to place our goods there; but in the National Association we will have confidence, and I am willing to place my entire product in the hands of the National Association, and that can be done in this way: In each locality let them place their honey, not simply by shipping it to a certain point, but by reporting. I might report I have in my locality ten cars of honey, represented by samples submitted to the management of the National Association; and the management of the National Association, having in their hands their reports of the honey all over the United States and Canada, or other territory, are in a proper position to market this honey at the different markets that are open for the product, and not to force or overcrowd any particular point. That has all been discussed before. The small holders—the men who must sell, and must have the money in our local association—bring in their report to me, and I will go with them to the bank and secure money for them, and they will pay interest upon the money they use. This very same arrangement can be worked out through the National Association. If I was in need of money and could not wait until the Association sold my goods, then I could afford to pay interest on the money that I had to have.

Dr. Mason—Instead of selling your honey at a sacrifice.

Mr. Brown—Yes, that is the point. The Raisin Growers' Association do it in this way. They pool their product; it is all placed in the hands of the management of the Association as goods belonging to the Association, not in the hands of the individual at all; the goods were placed with them under written, signed contracts; the Raisin Growers' Association place the goods upon the market, and when one car-lot is sold each person receives his pro rata, and so on until the whole store of goods is disposed of, declaring dividends at certain times as they proceed. The same thing can be arranged through the National Association in selling our honey.

H. Rauchfuss—Couldn't it be done much cheaper by consolidation and co-operation? Couldn't it be carried one step further? We all admit it is done cheaper under the Raisin and Fruit Growers' Association than individually. Wouldn't it still tend to lessen the expense if the different organizations had one store-house and one management to market their production from?

Frank Rauchfuss—In the first place, we found that if we wanted to do any business in this State we had to make it a stock company at the start. Now, if a person belonging to the Association brings in his honey to be sold by the manager, he is charged 10 percent commission for storing, selling the honey, and having it insured against fire, and collecting the money. Now, that might look rather big, 10 percent commission; I suppose it is, but we have to make it that large to be on the sure side; and two years ago we would also buy a little honey from the outside, and sell it to people that did not belong to the Association; then, we would make a little money out of the supply business, and in this way, after the season was over, and we closed up our business, it cost us one-tenth of one percent to have our honey stored, sold, money collected, and all. Just think of it, one-tenth of one percent! I would like to say, where is the association or business house that could do business for less than that? And we got an excellent price for our honey.

If there is a member of our Association that is short of money he will bring in a hundred cases of honey and say, "I would like to have some money on that." He can have his money at very low interest. If it is only a week until his crop is sold the interest is off.

I believe it will do a great many of our members good to look into the matter a little closer, and get some of our constitutions and by-laws and study the matter; but we ought to have something provided, we ought to be connected with this Association, or with some other association—we ought to have a central organization.

Of course, we of Colorado are trying to spread out and trying to have our local organizations—for instance, we have one at Longmont, and as we grow we will have some at other places, but really it ought to be done by some one else; it ought to be done by the organization, and they ought to go to work and do it. But how we could do it is very hard to determine. You can not figure these things out in five minutes. It took us a good many years before we could incorporate, before the people could be gotten interested in it and do anything for it. So far it has been successful, and I would like to make a motion to the effect that our chairman be empowered to appoint a committee of five to consider the matter, and find ways and means to organize and get closer in touch with such organizations; we shall call them business organizations, for that is really what they are. I don't think it is practical to have any State Association or any other of those organizations do it; it has to be nothing but a business organization. It takes money to do it. Here in this State it has to be a stock company.

J. Merkley—I second the motion.

The chairman stated the motion, and, on the question being called for, put the motion, which, on a vote having been taken, was declared carried.

(Concluded next week.)

Queenie Jeanette is the title of a pretty song in sheet music size, written by J. C. Wallenmeyer, a musical bee-keeper. The regular price is 40 cents, but to close out the copies we have left, we will mail them at 20 cents each, as long as they last.

Contributed Articles.

Rearing Prolific and Long-Lived Queens.

BY C. P. DADANT.

THE discussion which has taken place in the American Bee Journal about this matter has drawn the attention of bee-keepers throughout the world. It may be of interest to the readers to hear some of the opinions expressed.

In the "Revue Internationale," of Switzerland, for October, 1902, Marius Barthelemy writes as follows:

"It was by crossing and selection that I obtained queens that are beautiful and robust, and producing bees which resist the diseases that prey upon the race, and which I attribute mostly to degenerescence by weakness. One must be very careful in condemning a method, for all depends upon the manner in which it is used, the least oversight, the least fault, leads to failure.

"To obtain good queens, we need a temperature of not less than 65 degrees outside; eggs or young larvæ from choice queens whose laying has been stimulated by feeding; plenty young bees from active colonies; a copious supply of food till the queens are sealed; and, lastly and sine-qua-non, the nucleus or colony must be *gorged* with bees. It is not necessary that the hive be large, if it is strongly supplied with bees.

"I find the Doolittle method excellent for extensive bee-keeping, but I like also the Alley method.... But my opinion is that the great effort must be in the direction of choice breeders to improve the race."

In L'Apicoltore, of Milan, Italy, the editor of that progressive magazine—the Signor DeRauschenfels, who is the author of a treatise on bees, and who has for years sustained the most progressive methods—writes the following in reply to statements and enquiries on the matter of queen-rearing:

"As to the opinion of Malan Brothers, that queens reared, as it is called, artificially, are less robust and suffer more from long travel than those reared at the swarming season or in replacing an old queen, we assert that though it is customary to prefer a swarm's queen-cell, to a 'supplied cell,' the queen which issues from the latter, provided it was reared in a normal colony, transported with sufficient care to a sufficiently populous, so that neither heat nor care could be wanting until the queen hatches, is neither less robust nor alert than the one which is reared in the normal family."

For many, many years, the tendency of our queen-breeders has been in the direction of color. All, or nearly all, their efforts were on this one point. The Italian bees were yellow, and the yellower the bees the purer they were thought to be. In-and-in breeding was a natural consequence of selecting always from the yellowest. Thus the breed was weakened, by a very unreasonable and yet very natural selection. Whatever popular sentiment demands is sure to come on the top. We are much less prone to look to color, because the Italian bee is very thoroughly established in this country, and hybrids few. So we are running much less risk of having our queens bred from only one pattern.

I believe that these discussions will lead to a great deal of good. Whether we decide that one man or another is right, we will certainly all come to the conclusion that we must use great care in the selection of our breeding-queens; and that we must, as much as possible, get our drones from choice stock also. All will also recognize that the queens must be bred in hives having a strong population, and lacking in nothing in the way of warmth, nourishment, and nurse-bees.

Hancock Co., Ill.

A Central Honey-Producers' Exchange.

Written for the Wisconsin Convention held at Madison in February, 1902.

BY GEORGE W. YORK.

PROF. A. J. COOK, in his article published some time ago in the American Bee Journal, told of the wonderful success with which co-operation on the part of the producers of certain orchard products had met in California, notably the citrus fruit-growers. He urged a similar organization for the producers of honey. And Prof Cook is right.

But the question is, How shall an effective co-operative organization be formed among bee-keepers? I wish that I might prove myself a modern Moses who could lead out the children of Langstroth from the land of bondage of low prices and uneven distribution of honey to the Promised Land of fair prices and fair profits in bee-keeping. But though this may not be, still I may at least try to offer a few suggestions that will perhaps start some abler mind on the highway to wise planning and successful achievement.

I have long thought that in Chicago there should be organized and conducted a stupendous honey-producers' exchange. This central organization should ascertain the probable amount of honey in the country at the close of the honey harvest; should have large suitable space for the storage of honey; and be in a position to advance, if necessary, say a quarter of the actual value of the honey it undertakes to handle. It should also be in close touch with every large or small honey market in the United States, and be able to make shipments to foreign countries. Having the proper facilities and brains to manage all its affairs, it should soon be in a position practically to handle all the honey to be sold outside the home or local markets of bee-keepers in this broad land of ours.

Let it be generally known throughout the country that there is a great Honey-Producers' Exchange in Chicago, and from every town or city of any note in the United States there would come inquiries for honey. Many car-load shipments would be made not only direct from Chicago, but much in freight charges would be saved by telegraphing to the centers of honey-production (in California, Colorado or Arizona, for instance) for car-loads to be sent direct to St. Louis, New Orleans, Cincinnati, or to the Eastern markets. Of course, the surplus honey stocks should be used first to supply the needs nearest where produced, then afterward ship honey in from a distance. By so doing there would be secured a more even distribution, preventing an over-supply at any given point, and putting a fair amount of honey where now, perhaps, but little if any is used.

This central exchange should adopt and use (also authorize to be used under proper restrictions) its own brand on every case, can, jar, or comb of honey that is moved under its supervision. By so doing, in a very few years the honey put on the market by the Central Honey-Producers' Exchange would have a value that could not be estimated, for every pound of honey bearing its brand—and so its purity and quality backed up by the greatest honey-producers' exchange on earth—would command a higher price in every market on the globe.

Now, maybe I am visionary. Perhaps I have sawdust where bright brains should be. But to me this all looks feasible. Of course, it would take some capital to start it. A large storage warehouse should be leased; one efficient, pushing man, capable of managing large affairs, should be employed, and given the power to add such assistants as may be necessary. He should be the directing genius, responsible only to a board of say five directors, elected annually by the stockholders. Stock could be taken at so much per colony of bees owned, perhaps two or five dollars a colony. That is, if a man owned 100 colonies he would need to put in $200 or $500, as might be arranged. It should prove a handsome dividend-paying investment. But no honey should be excluded because its producer is not a stockholder, and all the honey of local bee-keepers should be brought up in instances where it is found that such honey is being offered at a price below what it should bring in view of its grade, and the carefully estimated amount of honey produced in the whole country that season.

Oh, I might go on, and on, and give detail after detail, but all that will unwind itself when once the thing is started.

I suggest further that this subject be taken up in the bee-papers and conventions from now until the next meeting of the National Bee-Keepers' Association, when definite action can be taken either by the Association itself or by individuals who may get together and organize for the purpose of planning and carrying out an exchange such as is here proposed, or one similar to it.

Bee-keepers need to do something, and that right speedily, in order to help themselves, by maintaining just and fair living prices for their honey. The National Bee-Keepers' Association could help greatly in getting this very important subject before the bee-keepers of the country, and in a way that will bring tangible results—results that will mean more to every honey-producer than anything else that has happened since Father Langstroth unfolded the inside of a bee-hive to the view of wondering mortals. It would also mean much to the honey-consuming public. How few there are who really know the great value of honey as a daily food. Its medicinal qualities are scarcely dreamed of by the majority as yet. All this valuable information could be brought to the attention of the public through suitable advertising matter—by leaflets and through the newspaper press—all of which would tend to increase the demand for the delicious pure honey put on the market by the honey-producers' exchange.

I, personally, have had sufficient experience in the honey-selling business itself to warrant me in saying that here is a profitable field whose develpment only awaits—yea, pleads—the coming of a honey-producers' exchange such as I have outlined. And the bee-keepers themselves, could they once understand its objects, would hasten to embrace the opportunity to place themselves in line so that its beneficent results might extend to them.

If the bee-keepers of this land would be as wise and alert as are the bees they own, they would soon organize along the lines indicated, and thus place themselves and their precious product before the people in a way that would command not only high respect, but would also create an unlimited demand for all the concentrated sweetness in the shape of honey that could be produced annually by all the bees in all our grand country.

Cook Co., Ill. Jan. 17, 1902.

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

Good-Natured "Drones" are Welcome—Smoker-Fuel.

Referring to the article on page 760, I may say that however dangerous it may be in general for "any old drone" to attempt to enter this department, he may make the attempt without the least fear if his coming is accompanied by as good-natured and bright remarks as those of Mr. Whitney on the aforesaid page. Neither is our genial Afterthinker in the danger Mr. Whitney supposes. We shall always deem it an honor to have him consider the sisters of sufficient consequence to think about them, whether his thinking be before or "after."

As to apple-wood for smoker-fuel, it is again as Mr. Whitney says, a question of "locality." In the home apiary and in the Wilson apiary, aside from chips, apple is the favorite wood, while in the Hastings apiary it is never used, burr-oak having the preference. The first two apiaries are located in apple orchards, while the Hastings apiary is in a lovely little grove of burr-oaks.

A Beginner's Experience with Bees.

My Dear Miss Wilson:—I take the American Bee Journal, and write to tell you how interested I have been in your articles on "Bee-Keeping for Women." I am a beginner, and am very much interested in bee-culture; in fact, I have what they call the "bee-fever."

In the summer of 1901 I got the "A B C of Bee-Culture" and studied it all summer and all winter. In the fall I bought two colonies of common bees in Simplicity hives. One colony died of starvation. The other, by feeding, managed to pull through. So, in the spring, I had one colony. I practiced stimulative feeding. I put a hive-body on top of the old one, to give them plenty of room, and to keep them from swarming, but they cast a large swarm the first of June, which I lost. In order not to lose a possible after-swarm, I took the top story off and set it on a stand by itself. I then bought a red clover queen and put her in. I clipped her wing first, but as I failed to cut out all the queen-cells I didn't for a moment believe she had been accepted. But I find the bees in that hive are different from the others. Many of them are very yellow; some of the drones are nearly all yellow.

1. Do you suppose she was accepted, after all?
2. If so, why are the bees not all yellow?
3. Do you suppose there could be two queens?

That colony gave me 60 sections filled with as beautiful white honey as I ever saw. I got only 10 from the other colony. I have sold it nearly all for 16 and 20 cents a section.

I now have the colonies packed on the top with chaff cushions, as the books direct, but I have put nothing on the sides. One is the Simplicity hive, the other is a Danzenbaker, which I bought in the flat, and nailed up and painted myself. The hives are very heavy with honey.

4. How do you think I have succeeded with this my first venture? I knew nothing whatever about bees; what I have learned has been through reading, and I read everything I can lay my hands on. I enjoy it thoroughly, all but the stings; they bother me quite a little. There is no pain of any account, but when the poison begins to go through my system I become unconscious, followed by nausea and vomiting. I am hoping in time I will get over that.

5. What do you think about it?

There is one thing I don't believe I will ever be able to do, that is, to find the queen in a full colony. It seems to me next to an impossibility to pick her from the mass of bees.

I don't care to bother with extracting, so I am going to work for comb honey entirely. I will use the Danzenbaker hives. I know nothing whatever about them, or any other, for that matter. I bought five in the flat last winter, and put them together without any assistance. It was like working out a puzzle, though, to get all the parts together. I had nothing to go by except the instructions in the little book that came with them.

I live in a town, and have my bees in the rear of the lot. No bees are kept for miles around. I can not give them much attention from the middle of June to the first of September, as I am away during that time.

I hope, Miss Wilson, I have not taken too much of your time with this preamble. But I did want to talk to somebody who knows about bees, and tell him or her what I have done. It seems to me I have done fairly well. The season was wet and cold, and not a good season for bees, the American Bee Journal says. I am sure no one could get along without a bee-paper of some kind.

Monmouth Co., N. J., Nov. 25. LUELLA R. HALL.

ANSWERS.—1. Yes, I think she was accepted; she probably destroyed the queen-cells.

2. It is nothing uncommon to find that the bees are not all marked alike in the same hive, even if the queen be purely mated. If the hives are close together I think the bees mix more or less, as I have often noticed that where a colony of very yellow bees stood next to a colony of dark-colored ones, I would often find some very yellow bees in with the dark bees, and some black bees mixed with the yellow ones.

3. No, I do not think it very likely that there were two queens in the same hive. It is only rarely that two queens are allowed to remain in the same hive, and they are usually mother and daughter.

4. I think you have every reason to be proud of your first venture—60 sections from one colony was doing very well indeed. And you succeeded in getting a good price for it, too.

5. I am very sorry that bee-stings affect you so unpleasantly, but I will say for your comfort that when I first commenced to work with bees, a sting would make me sick for two or three days. A sting on the hand would probably swell my eyes shut. Now, when I am stung I do not suffer at all except the pain the sting inflicts, and in a very short time can not tell where I was stung. The system becomes accustomed to the poison in time.

Don't worry about not being able to find a queen. In time you will laugh over the idea that you even thought you could not find her, although at present it looks like a big undertaking.

Too bad that you have to be away from your bees just at the time they need attention most.

Don't worry about taking too much of my time. I shall hope to hear from you *often*. I shall be very much interested in hearing how you are succeeding.

Our Wood Binder (or Holder) is made to take all the copies of the American Bee Journal for a year. It is sent by mail for 20 cents. Full directions accompany. The Bee Journals can be inserted as soon as they are received, and thus preserved for future reference. Upon receipt of $1.00 for your Bee Journal subscription *a full year in advance*, we will mail you a Wood Binder free—if you will mention it.

The Afterthought.

The "Old Reliable" seen through New and Unreliable Glasses.

By E. E. HASTY, Sta. B Rural, Toledo, O.

ABOUT THE SHAKEN OR FORCED SWARMS.

Anent the "shook" and how it should be shook. "Important that the bees should be gathering honey and secreting wax."—H. R. Boardman. Strong hint that bees, especially black bees, sometimes resent the performance and swarm out.—(Harry Howe.) M. A. Gill discovers for us that it is essentially the same as "driving;" which the bee-keeping Abraham, if not the bee-keeping Adam, used to practice. E. F. Atwater thinks it very important to give the shook more bees from time to time. Pouder (we are not surprised to learn) get's 'em up five stories high—the colonies made out of the residuary frames of brood. Ernest Root puts first the tremendous importance of rendering practical (if the thing fully works) a non-swarming out-apiary run for comb honey, and with small brood-chambers. Page 717.

BEES AND HONEY AT THE ST. LOUIS FAIR.

At St. Louis bees and honey won't be put upstairs, nor down cellar, because there is not to be any upstairs or down cellar in the agricultural building. Good. $35,000,000 to be spent there, eh? The Yankee genius for wasting money is hugely developed, but it would be sad and queer if they wasted all that. Page 726.

HEALTH CERTIFICATE FOR MOVING BEES.

Hambaugh is right. No colonies to be sold or moved out of an infected apiary till written permission of the inspector can be given. Page 727.

SHADE FOR HIVES.

W. R. Ansell is right—to the extent that a good and sufficient shade-board is a little ahead of any practicable living shade. May play truant, and be absent when needed most, which the latter does not do. Page 728.

IS THERE A DIFFERENCE IN QUEEN-LARVÆ FOOD?

That bees may put a large lump of extra jelly in a queen-cell and yet the *quality* of the jelly be so poor that a very poor queen must necessarily result. This proposition drawn from Henry Alley, page 729, seems improbable to me, somehow. Mr. Alley calls for chemical analysis to show. I don't believe we have any chemists that are fully equal to a task of that sort. They may understand it, more's the pity. The difference between good and poor in similar foods (while often tangible enough) may be an exceedingly elusive distinction.

DR. MASON'S PICTURE.

The picture of Dr. Mason on page 739 is an excellent one. I have often wondered why the picture reproduced on the outside of No. 49 was so much in vogue. A base slander on the good Dr. Imputes a dull, corpse-like look to a man who both looked and was very much alive.

THE QUEEN AND SWARMING.

I would reply to Dr. Miller, on page 745, that although Alabama's first case is not technically an exception to the rule, that a queen of the current year is a remedy for swarming, it is a serious shortcoming in the rule—one of the things which prevent it from being of much use to us practically.

BEES CARRY DOWN COMB HONEY.

I think George Brown is liable to have cases, some time in the future, when bees that are light of stores below will provokingly neglect to carry down comb honey even when it is uncapped. Page 748.

COMB FOUNDATION IN SECTIONS.

Have a little more charity, Mr. Bartz. Use it in full sheets, and put in bottom starters of it, too. Not probable that such a lot of men, and such good men, hold their views insincerely to advise foundation. Neither is it probable that their ignorance averages a much greater density than—ours, for instance. I'm in the same boat with you as to practice—do not myself either use or advocate full sheets of foundation in the sections—but still I am willing to assume that at least some of the folks in the other boat have adjusted themselves correctly to their own locality, bees and circumstances. Page 732.

BEES AND A RAINY CLIMATE.

And so in the most rainy county of the most rainy State (where the inhabitants are accused of having fins and scales), a good many farmers keep a few bees—sure sign that a rainy climate is not a total bar to honey-storing. Page 749.

MANY KINDS OF PHACELIA.

Thirteen species of phacelia in one section of California. Thanks to Editor Cowan for posting us about the phacelias. Evidently the tansy-leaved phacelia is a great producer of honey; but whether the amount and quality of the green forage it can be made to yield will tempt our farmers to raise it—aye, there's the rub. Page 750.

A LOT OF DONKEYS!

My, what a lot of donkeys gaze out upon us from the title page of No. 48!

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

Moving Bees by Railroad in Winter.

Could I move a few colonies of bees to Alcona, Mich., about the middle of January? It being cold at that time, would the combs break down in transportation?

Would the bees freeze before I could get them on their new stands and fixed for cold weather?

Please tell me all that is required for such handling.
OHIO.

ANSWER.—The weather, the condition of the combs, and the manner of handling, all have a bearing on the case. The colder the weather, the more brittle the combs. If the combs are old and tough, there will be less danger of breaking. Wired combs are safer than those not wired. Unless the colonies were very weak, there would be no danger from freezing the bees. The distance is so great that you would probably move them by rail. Place them in the car so that the frames run parallel with the railroad tracks. Fasten them securely so that they cannot move about in the car. The entrance closed with wirecloth will give them all the ventilation needed for such cold weather.

Spacing-Anchor for Brood-Frames.

I have noticed complaints as to spacing-staples used in the ends of the brood-frames. I herewith enclose a cut of a home-made "spacing-anchor" which I hope will satisfy complainants' taste, as it is very simple and made of the same size wire as the common staples comes in.

The spacing anchor is inserted through small holes pierced through the ends of the top-bar, and the sides of the frame. The holes are put in the middle of the bars, about ¼ inch from the side-bars in the top-bar, and one inch from the top-bar in the side-bars.
J. HILLER.

ANSWER.—The "spacing-anchor" as explained, passes through the top-bar ¼ inch outside of the end-bar, and is then bent to pierce the end-bar an inch lower down. This makes the frame practically a wedge, which if let down evenly must automatically go to the right place. It certainly looks all right, and before I ever tried any end-staples I invented and used the same thing. In actual practice, however, it does not work so well as the staples. The very feature that commends it in theory is against it in practice. Until it is very nearly down in place, it allows one end to drop down inside, whereas the minute the staples strike at all, it prevents the possibility of the other end dropping down. This dropping down is the thing that has been complained of, and the staples prevent it more than any other plan. It is possible that those who have had trouble about dropping down do not have the most accurate work, as others have no trouble of that sort.

If any one wishes to try the plan proposed he can easily try one or more frames by driving in a thin wire nail through the top-bar, and then bending it in to the end-bar.

Bees Humming in the Cellar—Odd-Size Frames.

1. Do bees always keep on humming in the hives all winter when in the cellar, in which the temperature is 45 degrees? If not, please tell me the cause.

2. What will be the price, per hundred, for frames of these dimensions? Langstroth length bottom-bar, but 13 inches deep from top to bottom, outside measure.
IOWA.

ANSWERS.—1. I believe there are some who say their bees are found entirely quiet, but I think mine never are. A humming, more or less pronounced, may always be heard. They seem to go somewhat in waves, occasionally stirring up so as to make quite a little noise, but almost entirely quiet during the rest of the time. These periods of occasional waking up differ in the different hives, so that when one stands to listen at the door of the bee-room there is a constant, gentle murmur, which I confess I rather enjoy hearing.

2. I don't know. Such a frame, being an odd size, is probably not listed in any catalog, and would have to be made to order; but if you will apply to any manufacturer he will no doubt quote a price.

Piling Up Hives with Bees for the Winter.

Would it be safe for me to stack up the hives with bees each upon the other in a warm room, without any fire near by, for the winter? Also, would it do to stop up the entrance with some small strips of wire-screen to keep the bees in? If so, would they need water before the winter is over? I am a beginner in the bee-business, just began last spring.
NORTH CAROLINA.

ANSWER.—The probability is that it would not work well. Something depends on what you mean by a warm room. It is generally considered that 45 degrees is warm enough. If, however, you could have them in a room with steady heat, in perfect darkness, with pure air all the time, it might do to have them a good deal warmer. Don't think of fastening the bees in the hive. Some have tried it to their sorrow. When a bee tries to leave the hive in winter, if it finds itself penned in, it will raise a commotion and set others trying to get out, whereas if the entrance is free it will quietly go without disturbing any one else. The thing to do is to try to keep bees from wanting to leave the hive, not to fasten them in.

Sowing for Bee-Pasturage—Moving and Wintering Bees—Shower-Grass.

1. Just adjoining my place is a railroad right-of-way, and on it a very high field, a quarter of a mile long. What can I sow on this right-of-way best for bee-pasturage? Of course the seed cannot be worked or cultivated, it can only be sown on top of the ground, and take the chances on growing.

Then, again, the weeds on this right-of-way are cut twice during the summer, by the section-hands. Now, as the seed cannot be worked in, and as the weeds and grass are cut twice a year, what would I better sow? There are several acres, and I would like to turn it into a bee-field.

2. Is it best to move bees when they have to be moved several miles now, or wait until spring? I prefer to move them now.

3. My home is built with an L, facing the south, and in that L I can put several colonies of bees. The house will protect them from both north and east winds. The sun can shine right into the face of the hive. Will that be a good place for bees in winter? I cannot keep them there in summer.

4. What do you think about "shower-grass" for Kentucky?
KENTUCKY.

ANSWERS.—1. I don't know. I think I should take my chances on sweet clover. Seed sown either spring or fall, especially if the stock could tramp it in, would be likely to make a catch, and if only a few plants should start, the seeds from them would make an increase. You should sow two years in succession, for the plants from the first seed would not bloom and mature seed till the second year. The cutting twice a year might do harm, and it might not—depends on when it takes place. If the first cutting should take place a little while before the time of blooming, it would be an advantage, probably. For if white clover abounds you do not care for sweet clover till later, and cutting at the right time will make the sweet clover bloom later.

2. It would probably be a little better to move them in the spring, but in Kentucky the difference would probably not be much.

3. I *guess* it would be a good place. Try it.

4. I never heard of "shower"-grass before. Perhaps some one else will tell us about it.

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With Poultry and Incubators.
That is the title of our new 1903 book—196 large pages. It is far superior in every way to its predecessors. It embraces all that is best in poultry keeping, duck growing, broiler raising, egg farming and the production of winter chickens or roasters, drawn from the experience of the best experts in the country. It fully describes and illustrates the unequaled
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which embody the greatest discovery of modern times in the field of successful incubation by artificial means. 250 illustrations show poultry plants that use Cyphers exclusively in the U. S., Canada, England, Germany, Holland, New Zealand and other foreign countries. Send 10c (merely to pay postage, as the book is free) for book No. 50. Circulars free.
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Tells all about Bees in California. The yields and Price of Honey; the Pasturage and Nectar-Producing Plants; the Bee-Ranches and how they are conducted. In fact the entire field is fully covered by an expert bee-man. Besides this the paper also tells you all about California Agriculture and Horticulture. $1.00 per year; 6 months, 50 cents. Sample copies, 10 cents.
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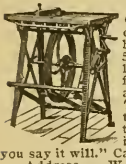

Read what J. I. Parent, of Charlton, N. Y., says: "We cut with one of your Combined Machines, last winter, 50 chaff hives with 7-in. cap, 100 honey racks, 500 brood-frames, 2,000 honey boxes, and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make, and we expect to do it with this Saw. It will do all you say it will." Catalog and price-list free.
Address, W. F. & John Barnes,
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FROM MANY FIELDS

Good Prospects for 1903.

We are having a very wet time here, snow, rain and ice, but no cold weather.

The bees are doing well on their summer stands. I expect a good honey crop next summer. I have 10 acres of crimson clover, and it is fine, and about 4 acres of alsike, and lots of white clover. We cannot help getting a good honey crop, and I will try and take good care of it.

L. A. Hammond.

Washington Co., Md., Dec. 20.

Bees at Work in California.

I have 4 colonies of black bees, and one of Italian. They are packing in pollen as hard as they can, and 3 weeks ago I had a colony of black bees that had only one comb built; it was a late swarm that was given me. I looked at them the other day and they had 6 combs heavy with brood and honey.

I am going to buy a lot of old boxes with bees right here and transfer them. One man has some bees and he never gets a swarm, and his sister got a patent hive and put one swarm in; it would not stay, so she caught another one, and said she would make this one stay in, so she poured hot water on them, and they died. She wondered why!

There are lots of eucalyptus flowers and Narcissus. The fruit-trees are budding out, and there are lots of roses and violets.

R. Thompson.

Martin Co., Calif., Dec. 10.

The Season of 1902.

It was a poor season for bees here; it was very cold in June, and the bees dwindled badly. I lost 14 colonies, and 3 more were breeding up very slowly, so I killed the queens and put swarms in with them, and they were all right. The first of July the weather was somewhat better, and the bees began storing in the extracting supers. I had 47 good colonies, increased to 71, and got 3200 pounds of first-class honey.

Edward Knoll.

Grey Co., Ont., Dec. 17.

Results of the Past Season.

The bees did next to nothing the first part of the season, but did well the latter part. I got 1400 pounds from 32 colonies. The honey was darker than usual.

The bees have gone into winter quarters strong and heavy. The prospects for another year are grand.

C. A. Fairbanks.

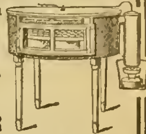
Jones Co., Iowa, Dec. 11.

Bees Prepared for Winter.

I bought 5 colonies last spring, and increased to 10; they are yellow and blacks, and I have them in 9-frame chaff-hives. I prepared them for winter, as follows: Removed the oilcloth and placed a frame-work over the brood-frames, to allow one inch for the bees to pass over the frames, and then the straw mat, which is about 3 inches thick, to absorb the moisture; and packed outside, on 3 sides, with straw, and under the bottom-board, also

To make cows pay, use Sharples Cream Separators
Book Business Dairying & Cat.212 free. W.Chester, Pa

Counting Chicks Before Hatching
is not safe unless you have an
IOWA
ROUND
INCUBATOR



R. C. Bauerminster, Norwood, Minn., got 493 chicks from 503 eggs. He followed directions, the machine did the work, because it was built on right principles and by good workmen. The IOWA has fiber-board case, does not shrink, swell, warp or crack. Regulation and ventilation perfect. Our free book gives more testimonials and full particulars. Everything about incubation free.
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Wanted An honest partner and up-to-date bee-keeper to start out-apiaries. Have 130 colonies in good condition, mostly in 10-F. Hives. References wanted, and given. Address,
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On all cash orders received before Jan. 1, 1903, we will allow you a discount of 4 percent; before April 1st, 2 percent. Send us a list of the goods you want and we will quote prices by return mail.

G. B. LEWIS CO.,
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WHITE COMB HONEY WANTED.

Please write us, stating source gathered from, quantity, and price delivered here. It must be put up in no-drip cases. Address,

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There was more money made by Farmers and Gardeners in 1902 than in any previous year in the history of the United States. 1903 will equal if not excel it. Good seed is scarce—buy early.

Johnson & Stokes' Garden and Farm Manual for 1903 illustrates by photographs and describes some of the greatest Money Bringers ever offered. Shall we send you a copy? It is free. Sparks' Earliana Tomato has no competition in the extra early class—enormously productive of large, fine, smooth, solid fruit. Has made more hard cash for our customers than anything ever before introduced by any seedsman. Pkt. 20c. oz. $1.00. Our Manual is illustrated by direct photographs and is free. Shall we send you a copy?

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The leading Horticultural and Agricultural paper of the Pacific Coast. Published weekly, handsomely illustrated, $2.00 per annum. Sample copy free.

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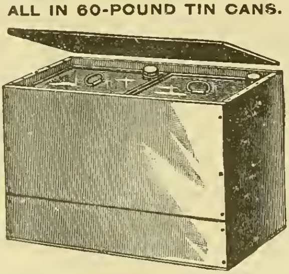
ALL IN 60-POUND TIN CANS.

Alfalfa Honey

This is the famous White Extracted Honey gathered in the great Alfalfa regions of the Central West. It is a splendid honey, and nearly everybody who cares to eat honey at all can't get enough of the Alfalfa extracted.



Basswood Honey

This is the well-known light-colored honey gathered from the rich, nectar-laden basswood blossoms. It has a stronger flavor than Alfalfa, and is preferred by those who like a distinct flavor in their honey.

Write for Quantity Prices by Freight, if Interested.

A sample of either, by mail, 10 cents, to pay for package and postage.

Order the Above Honey and then Sell It.

We would suggest that those bee-keepers who did not produce enough honey for their home demand this year, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere.

GEORGE W. YORK & CO., 144 & 146 E. Erie St., Chicago, Ill.

the entrance, which is 5-16x13½. I left the opening about 2 inches wide.

The bees have not taken a flight since November 12. The other day it was fairly warm, and I noticed that half of the bees in one hive were dead, so I disturbed them, and found moldy combs. What caused the combs to become moldy, and the bees to die?

My bees have honey enough for the winter, but I did not get any surplus—too much rain and cool weather. My bees are well sheltered against the cold winds, on the north by hills, and on the west by timber.

I do not see how any bee-keeper can get along without the American Bee Journal.

CHAS. J. DOPPEL.

Ozaukee Co., Wis., Dec. 23.

Bees Did Fairly Well.

My bees did fairly well the past season. I received about 35 pounds of honey per colony, and my best colony gave 90 pounds, 72 pounds during the month of September.

I run for extracted honey, and winter the bees on the summer stands.

I will have to call Dr. Miller's attention to the fact that I had a laying queen that crawled through the queen-excluder (a new one), and laid eggs in the extracting-super. She was a good-sized queen, at that; of this I am positive.

The American Bee Journal is all right.

CHAS. M. DARROW.

Vernon Co., Mo., Dec. 16.

Bees Starved to Death.

I hear complaint of bee-keepers (in a small way) that their swarms of last summer are now dead from starvation. A few of our bees were carrying in water until the close of November.

We have calls for honey frequently, but have none to supply the demand. A car-load of comb honey arrived lately from California.

MRS. L. HARRISON.

Peoria Co., Ill., Dec. 15.

A Bad Year for Honey.

We have had a bad year for honey. The bees will have a hard time of it next spring, if they are not well fed. G. D. HAWK.

Sullivan Co., Tenn., Dec. 5.

Honey-Yield Disappointing.

The yield of honey has again been disappointing to the bee-keepers of northern Pennsylvania as a whole, although a few in some localities were more fortunate than the many.

Apple-bloom and other spring flowers yielded an abundance of honey, so that the colonies were very strong, and all hands were on deck in great expectation of harvesting a big crop of clover and basswood honey. But it was not to be. It has been many years since white clover blossomed as it did the past summer. The cold, wet weather caused the failure. Buckwheat yielded a very little honey. Had it not been for favorable fall weather the bees would have needed feeding; as it was, they gathered an abundance of stores for their own use, and some surplus.

My yield of white honey was about 15 pounds per colony, and not so much fall honey.

We feel thankful that the prospect is very good for next year, as the wet season did wonders for white clover. GEORGE SPITLER.

Crawford Co., Pa., Dec. 9.

Bee-Keeping in Cuba.

I you were within hearing of my bees you would hear a mighty roar, and that means lots of work for the bee-man. They are now working on the purple bellflower (Aguinaldo marango), with white bellflower (Aguinaldo blanco) just coming into bloom.

I now have 300 colonies of bees. I shipped a ton of comb honey this morning; this comb honey venture is largely an experiment. I hope for success from it, however.

There are many things to contend with here, as well as in the United States. It seems to me there are more vexations. For instance, we are having swarms every day, bees do not behave half so regular as in California. Just think of it, bees swarming in December!

Your humble servant is against another proposition. Bee-keeping is an all-the-year-round grind here, not much let-up. In California we had 4 months of labor and 8 months of rest. J. H. MARTIN.

Cuba, Dec. 5.

A Report for 1902.

With 180 colonies of bees in the spring, I increased to 206 which I put into winter quarters Nov. 26. I harvested 5070 pounds of honey, which is all sold at 10 cents a pound. A. L. BEAUDIN.

Chateauguay Co., Quebec.

BEEDOM BOILED DOWN

A Plucky Cuban Bee-Keeper.

Editor Hill, says of Col. Ganzalo Garcia Vieta, in the American Bee-Keeper:

> Without previous knowledge of the business, the Colonel purchased the apiary established on the south coast of Cuba by the editor of The Bee-Keeper some sixteen years ago. During the late war the Spanish burned all his bees, which numbered about 2,000 colonies, and also his very complete apiarian equipment. Since then, however, Col. Vieta has gone up again like a rocket, and now has about 1,800 colonies, in five or six apiaries, scattered through the mountains. Since his return to Cuba, we are advised that even before the bellflower had begun to bloom, about 15 tons of honey had been extracted. The prospect for 150 tons of honey this winter is very favorable; and the colonel's enterprise is deserving of all the success which may come to him.

Our Consumption of Sugar.

The people of the United States now consume eight times as much sugar per capita as they did in the first quarter of the last century, four times as much as the average per capita during the decade ending with 1850, and twice as much as they did in any year prior to 1870. In the years immediately prior to 1825 the average consumption of sugar was about 8 pounds per capita; in the decade 1840-50 about 16 pounds per capita; in the years immediately prior to 1870 the average was about 32 pounds per capita, (omitting

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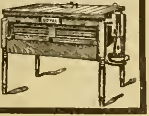
Dept. 78, Des Moines, Iowa.



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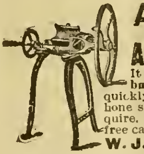
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Adam's GREEN BONE Cutter

It runs easily because it has ball bearings. It cuts clean, quickly and perfecly. Makes a fine bone shaving such as chickens require. Before you buy send for free catalogue No. 9

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Two ounces of this seed will give you a good start of one of the best honey-producing plants known. We will also send to the new subscriber on this offer the rest of this year's Journals free. Address,

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We will present you with the first $5 you take in to start you in a good paying business. Send 10 cents for full line of samples and directions how to begin.

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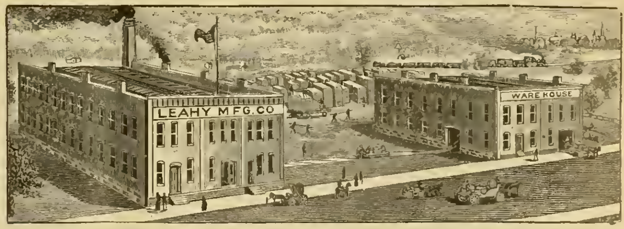

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..AND ALL..

BEE-KEEPERS' SUPPLIES.

Address, LEAHY MFG. CO.

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And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5lb	10lb	25lb	50lb
Sweet Clover (white).....	$ .75	$1.40	$3.25	$6.00
Sweet Clover (yellow)....	.90	1.70	4.00	7.50
Alsike Clover	1.00	1.80	4.25	8.00
White Clover	1.20	2.30	5.50	10.50
Alfalfa Clover	.80	1.40	3.25	6.00

Prices subject to market changes.

Single pound 5 cents more than the 5-pound rate, and 10 cents extra for postage and sack.

Add 25 cents to your order, for cartage, if wanted by freight, or 10 cents per pound if wanted by mail.

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46A26t Please mention the Bee Journal.

"Bees in Colorado"

I still have several hundred copies of the souvenir with the above title. The bee-papers and a good many people without visible axes to grind have said it is a valuable and attractive thing. If you should like to have a copy, send me a silver dime or 5 two-cent stamps, and I will mail you a copy.

"BEES IN COLORADO" is the title of a 48-page and cover pamphlet gotten up to boom the Denver convention. Its author is D. W. Working, the alert secretary of the Colorado State Bee-Keepers' Association. It is beautifully illustrated, and printed on enameled paper. It is a credit to Mr. Working, and will be a great help in acquainting those outside of Colorado with the bee and honey characteristics and opportunites of that State.—American Bee Journal.

D. W. WORKING, Box 432, Denver, Colo.

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Queen-Clipping Device Free....

The MONETTE Queen-Clipping Device is a fine thing for use in catching and clipping Queens wings. We mail it for 25 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device. Address,

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7000 lbs. Extracted Basswood Honey, stored in basswood barrels and kits. Large barrels each holding 330 lbs. net; ½ barrels, 180 lbs.; kits, 33⅓ lbs. Prices—7½c per pound in barrels, and 8c in kits, f.o.b. cars at Viola. Cash must accompany order. Sample by mail, 10c. Address,
41A13t **N. L. HENTHORN, box 83, Viola, Wis.**

Please mention Bee Journal when writing.

the war years, in which the consumption was light,); from 1870 to 1880 it averaged about 40 pounds per capita; from 1880 to 1890 50 pounds per capita; in 1891 the figure was 66 pounds per capita, and has ranged from 62 to 68 pounds per capita since that time, the figure for 1901 being 68.4 pounds. These are the official figures of the Bureau of Statistics of the Treasury Department. They show an increased consumption from 8 pounds in 1825 to 68 pounds in 1901.

Considering the rapid growth of that "sweet tooth," this nation would probably be happier—certainly healthier—if it could be gratified largely with honey, instead of so much sugar.

Sugar for Queen-Cage Candy.

Confectioners' sugar will not do for queen-cage candy. It should be of the right kind if queens are to be successfully sent through the mails, although it may not be easy to detect at a glance the difference between the right and wrong kind. As to distinguishing the two, Editor Root says in Gleanings in Bee-Culture:

> In general, confectioners' sugar is brought to a finer state of pulverization than the ordinary pulverized sugar. If you examine the former with a glass you will see besides the cane-sugar crystals something else, and that something else is starch. Pulverized sugar should show nothing but minute crystal cubes when examined with a glass of high magnifying power. But there is another way whereby you can detect the starch, and that is by the taste. If you can some time get hold of some confectioners' sugar and a sample of pulverized, taste one and then the other. You will then perceive a difference. There is, still, another difference. Confectioners' sugar has more of a tendency to lump up. While the pulverized will do so to some extent, the other will cling together in chunks that have a sort of flaky, brittle feeling.

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When the crowd began to increase toward the middle of the day, I produced a quantity of nice white biscuits from my lunch-basket, and with my honey-knife—clean and bright—I cut some of them into slices. I then opened a can of my finest honey and spread a little of it on each slice, using a small silver spoon for the purpose. Everybody was then invited to sample the honey. Hundreds of people undoubtedly had their first taste of extracted

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honey on those two days I kept up my lunch counter, and many sales were made right there and then. When people become acquainted with a good article of extracted honey, they will often buy it in preference to comb, even at the same price, for it is more convenient to use.—F. GREINER, in the American Bee-Keeper.

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HONEY AND BEESWAX
MARKET QUOTATIONS.

CHICAGO, Dec 8.—There is no special change in the honey market, prices remain as last quoted and the volume of sales are not large. The weather is such as usually prevails at this season of the year, and the cold may induce people to buy more freely. Best lots of fancy white comb honey brings 16c per pound; No. 1 to choice, 15c; off grades, 2c to 5c less, and not much demand for them. Extracted. 7@8c for white; amber, 6@7c; Southern, 5½@6c. Beeswax, 30c.
R. A. BURNETT & Co.

ALBANY, N. Y., Nov. 22.—Honey market is still in strong position with ready demand for all receipts at good prices. Fancy white comb, 16c; A No. 1, 15c; No. 2 and mixed, 14½@15c; buckwheat, 14@14½c. Extracted, buckwheat scarce at 6½@7½c; light grades more plenty at 6½@7c. Beeswax, 29@30c. H. R. WRIGHT.

BOSTON, Oct. 20.—Our honey market remains firm, with good demand and fair stocks on hand. Honey is not coming forward as fast as usual, and the tendency of prices is steady. We quote our market as follows: Fancy white 1-pound sections in cartons, 16c; No. 1, 15c; No. 2, very light supply, 14c; glass-front sections generally one cent less than this. Extracted, light amber, 8c; amber, 7½c.
BLAKE, SCOTT & LEE.

KANSAS CITY, Dec. 20.—Market steady at quotations. We quote fancy white comb, per case, 24 sections, $3.50; No. 1 at $3.40; No. 2 white and amber, $3 25. Extracted, white, per pound, 7@7½c; amber, 6@6½c. Beeswax, 27@30c.
C. C. CLEMONS & Co.

CINCINNATI, Dec. 8.—The demand for honey, both extracted and comb, has eased off somewhat the past few weeks, however the prices rule steady, as follows: Extracted, amber, in barrels, 6@7c; white clover, 8@9c. Comb honey, fancy, 16@17c; amber, 11@12c. Beeswax, 29@30c.
THE FRED W. MUTH CO.

NEW YORK, Dec. 23.—The market on comb honey is dull and inactive. While the supply is not large the demand has fallen off to a large extent and prices show a weakening tendency. We quote fancy white at 15c; No. 1, 14c; No. 2, 13c; and buckwheat at from 10@12c. Extracted is in fairly good demand; white. 7½c; light amber, 6½@7c; dark, 5½@6c. Beeswax firm at from 28@29c. HILDRETH & SEGELKEN.

CINCINNATI, Dec. 12.—The comb honey market is a little quiet, almost everybody is filled up. As there is hardly any new supply coming in, there is no change in prices, namely: Fancy water-white, 16c; off grades less. The market for extracted white clover shows a slight advance. Fancy white clover brings 8½@9c; alfalfa water-white, 6½@7½c; but amber, if anything, has weakened. I quote same, in barrels, 5¼@5½c. Beeswax, 27@28c.
C. H. W. WEBER.

SAN FRANCISCO, Nov. 12.—White comb honey, 10½@11 cents; amber, 9@10c; dark, 5@—c. Extracted, white, 6@6½c; light amber, 4¾@5⅛c; amber, 3½@4c. Beeswax, good to choice, light, 26@27c; strictly fancy light, 29@—.

White is reported scarce; light amber honey in fair supply. The bulk of California produced honey is sold for Eastern shipment in carload lots from producing point at bottom price. Small lots of choice honey that can be used in local trade bring more. Quotations here given are current prices to producer, f.o.b. shipping point, on Eastern basis for extracted and California basis for comb.

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A National Honey Exchange.

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AMERICAN BEE JOURNAL

43d Year. CHICAGO, ILL., JAN. 8, 1903. No. 2.

WEEKLY

APIARY OF E. H. BEARDSLEY, OF COOK CO., ILL.—(See page 20.)

THE AMERICAN BEE JOURNAL

PUBLISHED WEEKLY BY
GEORGE W. YORK & COMPANY
144 & 146 Erie St., Chicago, Ill.

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SPECIAL CORRESPONDENTS—G. M. Doolittle, Prof. A. J. Cook, C. P. Dadant, R. C. Aikin, F. Greiner, A. Getaz, and others.

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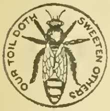
OUR TOIL DOTH SWEETEN OTHERS

NOTE.—One reader writes: "I have every reason to believe that it would be a very good idea for every bee-keeper to wear one [of the buttons] as it will cause people to ask questions about the busy bee, and many a conversation thus started would wind up with the sale of more or less honey; at any rate it would give the bee-keeper a superior opportunity to enlighten many a person in regard to honey and bees."

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By DR. C. C. MILLER.

DR. C. C. MILLER.

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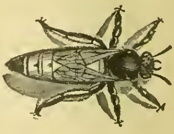
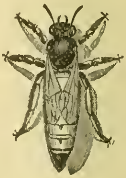


Or, any present regular subscriber to the American Bee Journal whose subscription is paid in advance, can have a copy of Dr. Miller's new book *free as a premium* for sending us **Two New Subscribers** to the Bee Journal for one year with $2.00. This is a magnificent offer. Better send in the new subscriptions before Jan. 1, so they can begin with the new year. Or, if sent at once, we will throw in the rest of this year's numbers of the Bee Journal free to the new subscribers.



GEORGE W. YORK & CO.,
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ESTABLISHT IN 1861

AMERICAN BEE JOURNAL

THE OLDEST BEE-PAPER IN AMERICA

43d YEAR. CHICAGO, ILL., JAN. 8, 1903. No. 2.

⁂ Editorial Comments. ⁂

A National Honey Exchange.—This is a subject to which we have given some thought for several years. Sometimes we feel that we have almost perfected, theoretically, a plan or plans by which it could be made a great success. Then, after thinking some more, we don't feel quite so certain about it. But we think we have about settled, in our own mind, that if ever a successful honey exchange is formed, it will have to be done by those who have had large experience in handling honey. Perhaps a few extensive local bee-keepers can manage a local exchange, but when it comes to organizing and conducting an exchange commensurate with the honey business of the whole country, it will require the most experienced and most level-headed business men to be found in our ranks.

One of the first things, we think, is to get men of financial and moral standing to undertake to form and manage the organization. It will have to be men in whom bee-keepers have full confidence, else they will never consent to trust them with the handling of their crops of honey.

It will take time to make a success of the work. Permanent and profitable enterprises do not develop in a year. The first few years may prove discouraging. Things may not proceed as anticipated. Quite likely the less determined ones will want to drop out. But final success will depend upon sticking together. Are bee-keepers ready to do that?

It is true, as Prof. Cook says on another page, that the marketing of the crops in other lines have been profitably managed in the interest of the producers. But it must be remembered that in every case the products controlled were those to be found practically in a single State, or even in a single section of one State. Honey is produced everywhere. Citrus fruits in Southern California. When New York, and Michigan, and Ohio, and Pennsylvania, have large crops of honey, where will the larger Western crops be sent to?

It's a big subject. It needs wisdom and experience in order even to get started. But by discussing it, and getting our best minds to work on it, it is possible that by the time another crop of honey is ready to be marketed, plans may be sufficiently perfected to begin the new honey exchange. We hope it may be so.

The columns of the American Bee Journal are open for the best ideas you have on this or any other subject of interest to bee-keepers.

Shpping Bees to Cuba.—The A. I. Root Co. report the shipment of 500 colonies of bees to Cuba so successfully that "not a colony was lost nor a single comb broken." They were shipped in two fruit-cars to New York, thence by steamer to Havana, and then 100 miles inland by rail. Hot weather and poorly ventilated cars made the last 100 miles the hardest.

Southern and Northern Bee-Keeping.—In general it is known that in the South the winter problem does not trouble; that the season is perhaps three months earlier than at the North; but Editor H. E. Hill gives in the Bee-Keepers' Review some striking differences not so generally known. Comparing the location of J. B. Hall, in Canada, with southern Florida, he says in part:

> Mr. Hall can store quantities of comb honey in the fall without fear of deterioration. In the humid atmosphere of South Florida it would most likely become worthless as a merchantable product within a week after being taken from the hive. Only continued artificial heat in a close room would save it from "weeping" or "sweating." This is a result of the well-known affinity of honey for moisture. During a great part of the year extracted honey exposed in an open tank, though sheltered, would become thinner instead of increasing its body. In this respect the contrast between the influence of the asmosphere in this country and the arid West is most striking.
>
> Mr. Hall can store his extracting combs in an open shed from season to season. In South Florida they would be destroyed within a very few days by the moth-larvæ. Here the webs of this destroyer may always be seen during summer, in combs that have remained off of the hive over night; as they sometimes do during the extracting season.
>
> Bees consume vastly more stores in Florida than in the North; hence, the increased item of "board" is considerable. This is a logical result of their continued activity. For the same reason the period of a queen's useful life is reduced about one-half.

"The Disappearing Trick" is a term coming into common use among Australian bee-keepers, and there's nothing funny about it, either. The older bees of a colony disappear in a sudden and mysterious manner, the strongest colonies appearing to be the ones most affected, causing very heavy loss of colonies. The bee-keepers are asking that government come to their aid by making investigations looking to cause and cure.

The Colorado Honey-Producers' Association is a great success, notwithstanding the fact that only about 20 percent of the Colorado bee-keepers have entered it. This offishness on the part of the majority is looked upon with some degree of discouragement, but the Rocky Mountain Bee Journal is inclined to be optimistic, and thinks there are two good reasons why there has not been a more general participation in the benefits of the Association. The first is that "new ideas, no matter how meritorious they may be, seldom attain popularity with the masses," so time must be allowed.

The second reason for apathy is one that may well be considered in reference to what may be done by organizations elsewhere, and, indeed, with reference to an organization taking in all. Editor Morehouse says:

> The ware-room of the Colorado Honey-Producers' Association is a long way from some of the honey-producing sections of the State. Freight to Denver, in some instances, is nearly as much as freight to the great centers of consumption and distribution. So far as we remember, the Association members have never publicly announced a plan whereby members could ship through the Association and

avoid the payment of local rates to Denver, except by the organization of branch associations. This is not always practical, and it also entails a great expense. If it is announced that arrangements can be made at any point in the State to consign cars of honey through to final destination without having to stop and unload for inspection in Denver, we believe that the Association would immediately enjoy a phenomenal and substantial growth. Here is a local case for illustration:

Boulder is 29 miles from Denver. It is too far to haul a large crop of honey by wagon, and the car-rate is $35. This makes the ware-rooms of the Association partially out of reach of the Boulder honey-producer. What, then, is the remedy? At the close of the honey season each member of the Association at Boulder can report his number of cases of honey to the Manager, and that he is ready to deliver at the car. When the Manager sees a market for his honey he can call for it to be delivered on a certain day, and if there is no one among the Boulder members proficient enough in the art of grading and loading, he can send some one who has had this training to inspect and receive the honey. The car can then be consigned directly from Boulder to the Eastern market, and the local charges to Denver avoided.

The plan is feasible for any railway station in this or any other contiguous State, and places the Association at the service of every bee-keeper in the State, no matter where he may be located.

The Election of the National, which was held in December, seems to be very unsatisfactory. Not as to its result (for at this writing no one knows who is elected), but as to the manner in which the ballot was prepared; also no amendments were submitted, though such were proposed at the Denver convention. In view of these irregularities, Mr. France writes us as follows for publication:

EDITOR AMERICAN BEE JOURNAL—

Dear Sir:—I feel that the lately issued ballot for officers of the National Bee-Keepers' Association is unfair. For the good of the Association I ask that a new ballot be ordered, said ballot to name all candidates for each office, so that each member can take his choice. Also, the said ballot to provide for voting on the proposed amendments to the Constitution.

Yours truly,

Grant Co., Wis., Dec. 31. N. E. FRANCE.

We are glad that Mr. France, who was a candidate for the office of General Manager, has sent us the above letter, which he informs us he has also sent to all members of the Board of Directors, for if he is ever elected to any office he will want to get it in a fair manner.

Here is an exact reproduction of the ballot submitted to the membership so far as the wording is concerned:

BALLOT: to be used by members of National Bee-Keepers' Association in December, 1902.

For General Manager for 1903, to succeed Eugene Secor, who wishes to retire,

(N. E. France, of Wisconsin, has been regularly and properly nominated, and is believed to be worthy of your support.)

(Write name voted for)

....

For 3 Directors to succeed Thos. G. Newman, G. M. Doolittle and W. F. Marks.

(Write 3 names below)

....

Sign your name and mail AT ONCE.

....

We can not conceive who could possibly get up such a ballot. If any candidates are to be named, surely *all* should be given. But it was unnecessary to name any on the ballot. None have ever been so named before. It has every appearance of being a scheme to defeat Mr. Abbott for the position of General Manager, who, with Mr. France, was also nominated for that office, in the American Bee Journal. Three or four candidates for directors were also nominated.

We have refrained from expressing publicly our personal opinion on the General Managership muddle heretofore, but we think it is now time for us to have our little say, which is this:

In our opinion, Mr. Abbott, when elected General Manager by the Board of Directors last summer, should have been allowed to serve to the end of the year 1902; then, if he showed, during that time, that he was unable to fill the office, another man could have been elected to succeed him. Had those in charge taken this view of the matter, a lot of trouble could have been avoided, as well as a half year of wasted time. Now let the membership settle it.

Of course, a new election must now be held, a fair and straight ballot sent out, including the amendments to the Constitution proposed at the Denver convention by Mr. Abbott. True, a lot of time and the Association's money have been wasted, but *now* is the time to straighten things up, and put an end to a lot of foolishness and mismanagement. The Association has done, and can still do, much good for bee-keeping; but unless all fussing and splitting of hairs among its officiary are ended for good, it may as well suspend operations. But we believe it has a greater future than its past has been, and that very soon all difficulties will be satisfactorily adjusted. As its new Secretary we shall do all in our power to have the National Bee-Keepers' Association do the work for which it is organized, and we believe the bee-keepers will help when they are satisfied that all is well with it and its management.

✻ The Weekly Budget. ✻

G. M. DOOLITTLE has had a break made in his life by the death of an invalid sister. Notwithstanding a very busy life, he has for the past two years found time almost daily to give her the ministrations of a loving brother.

EDITOR LEAHY, who was present at the Chicago convention, thus speaks of it in the Progressive Bee-Keeper:

"The Chicago-Northwestern Bee-Keepers' Association, which held its convention Dec. 3-4, was the best convention we have had the pleasure of attending for a long time. Besides the social features many interesting subjects were discussed with profit, we think, to all."

THE APIARY OF MR. E. H. BEARDSLEY is shown on the first page this week. Here is what he says of it:

The view is taken from the south side of the yard looking north. The building on the left is my shop (12x20 feet, and 12 feet high), where I do all my work, but the honey (when I have any) I carry into the house. The large building is the residence occupied by myself and wife, and a daughter and her family.

I brought my bees here April 6, 1900, about 45 colonies. I lost three or four colonies, but my crop for the season was 5500 salable sections, and some I cut out and sold as chunk honey; also quite a lot of bait-sections.

The next spring I found I had foul brood in the yard, and nearly all the colonies were affected. I shook them from the combs and gave them full sheets of comb foundation, and doubled them two to three, and sometimes three to one. Some stuck, and some swarmed out and went into other colonies, and when they got settled I had saved 8 colonies out of 48.

I bought more nuclei and built up, and in the fall I had 35 colonies and 2400 sections of salable honey, and lots of partly-filled sections.

Last spring (1902) the bees appeared to have come through the winter nicely. I lost only one colony before the middle of April, then they began to disappear, and by the middle of May I had lost 8 or 10 colonies more. Well, I bought more nuclei, ordered early, but did not get part of them until after the first of July. Oh, you know what weather it has been! Some of the nuclei built up (the ones I got June 1), and the late ones I doubled up and stole combs from old colonies to try to keep them over. I got very little honey, and it's poor stuff compared with that of other years. I have lost some with foul brood (destroyed two colonies in September), but I am hoping to do better next year.

I think now I have a sure cure for foul brood, and if you wish, here it is (I'm not selfish): Smother the bees in the night, dig a hole four feet deep, build a fire in the bottom of the hole, and when it gets hot put in the hive, bees, and all, and burn until it does not smoke. Then fill up the hole, and you have got that one, *sure*.

There is now a splendid show for white clover another year, but I am fearful for the sweet clover. So much rain drowned out all the young plants except on the higher land and on the sides of the streets where they are graded up.

E. H. Beardsley.

A Fence-Rail Colony.—Frank Rasmussen, of Montcalm Co., Mich., sent us the following picture and account of an open-air colony of bees:

This colony of bees, living and prospering the past season, as you see, without a hive or any protection whatever, was first discovered about Aug. 15, by a farmer known as "Buffalo Bill," on his lane fence about two miles from my apiary. The fence is of the patent rail kind, and the combs are built on the under edge of a large rail, the fence running north and south.

"BUFFALO BILL" AND HIS FENCE-RAIL COLONY.

There are five combs, the outside ones bulging clear out beyond the rail, and are at all times exposed to sun and weather. The outer comb on the side not shown in the picture, had, at the time I made the picture, a patch of sealed brood about 5 inches square, some healthy and hatching, and some dead from exposure. The inner combs were well filled with brood in all stages. The combs contained but very little honey.

The bees are hybrids, and are still doing business at this date (Sept. 29) at the old stand. The man shown in the picture is the finder and owner—"Buffalo Bill."

Frank Rasmussen.

Queenie Jeanette is the title of a pretty song in sheet music size, written by J. C. Wallenmeyer, a musical bee-keeper. The regular price is 40 cents, but to close out the copies we have left, we will mail them at 20 cents each, as long as they last.

Convention Proceedings.

THE DENVER CONVENTION.

Report of the Proceedings of the 33d Annual Convention of the National Bee-Keepers' Association, held in Denver, Col., on Wednesday, Thursday and Friday, Sept. 3, 4 and 5, 1902.

(Continued from page 7.)

Mr. Taylor—What business is there to come before the Association before the final adjournment?

Pres. Hutchinson—Committees to hear from.

Mr. Taylor—I would move that we take a recess and complete the business at the banquet hall this evening.

Dr. Mason—I second the motion.

The President put the motion to take up the reports of the committees at the banquet in the evening, which, on a vote having been taken, was declared carried.

The convention adjourned at 3:45 p.m., to assemble at the banquet hall in the evening.

REPORT OF COMMITTEE ON APICULTURE AND THE NATIONAL GOVERNMENT.

Whereas, The National Bee-Keepers' Association, composed of nearly 1000 members located in all parts of the Union, and represented at its 33d annual convention in Denver, Colo., in 1902, by many States and territories, expresses hereby its gratification at the recognition given apiculture in the United States Department of Agriculture at Washington, and the Association heartily indorses the work thus begun. At the same time it seems evident that a fuller, wider scope might, in the near future, be given to investigations in apiculture under the auspices of the Department, were more liberal and specific appropriations for this purpose to be made; and that the most advantageous application of such appropriations to the purpose intended, could be secured through the establishment (under the direction of the Honorable Secretary of Agriculture, in whose judgment and liberal-mindedness we have great confidence) of a separate division to be known as "The Division of Apiculture." Therefore, be it

Resolved, That we do hereby petition the Honorable Secretary of Agriculture, the Committees on Agriculture of both Senate and the House of Representatives, and the whole Congress of the United States, for such action on their part as will secure the establishment of the said Division of Apiculture in the United States Department of Agriculture, with an adequate appropriation for the purpose of conducting investigations in apiculture, both scientific and practical.

Further, your committee would recommend that the Board of Directors of the National Bee-Keepers' Association be requested, after due deliberation and consultation with those in charge of such work, make suggestions as to the most advisable lines of work to be undertaken by such Division of Apiculture, to the end that the latter and the National, and the various State and local apiarian societies, may work in harmony for the common welfare of our pursuit.

James U. Harris,
R. L. Taylor,
George W. York, *Com.*
F. E. Brown,
Orel L. Hershiser,

REPORT OF COMMITTEE ON EXHIBITS.

J. B. Adams, of Colorado, showed fancy glass jars of fruit made of wax.

J. U. Harris, of Colorado, 2 cases of honey.

J. C. Carnahan, of Colorado, 12 cases of fancy comb honey.

J. C. Belden, of Colorado, 10 cases of comb honey and bee-way sections.

J. S. C. Sterrott, of Colorado, 4 cases fancy comb honey.

All of the above was from Mesa county.

W. L. Coggshall, of New York, sample of buckwheat honey.

O. L. Hershiser, of New York, sample of clover and buckwheat honey in jars with aluminum screw caps.

Rauchfuss Bros., of Colorado, 2 nuclei of imported Caucasian bees, and combined section-press and foundation fasteners.

The Colorado Honey-Producers' Association showed bee-hives, smokers and general supplies made by G. B. Lewis Co., and comb foundation made by Dadant & Son; also samples of extracted honey in glass jars and comb honey.

Frank Benton, of District of Columbia, showed samples of shipping-cages for queens.

J. Cornelius, of Colorado, sample of seeds of honey-producing plants.

Frank Rauchfuss, of Colorado, samples of fruit put up with honey.

W. Z. HUTCHINSON,
O. L. HERSHISER, *Committee on Exhibits.*
GEORGE W. YORK,

REPORT OF COMMITTEE ON RESOLUTIONS.

Your committee would recommend the adoption of the following resolutions:

Resolved, That we are greatly indebted to the Colorado bee-keepers, and especially Messrs. Working and Rauchfuss, for the excellent preparations for the convention, and for the very cordial reception we have experienced; and we express our hearty thanks for the enjoyment of the trolley ride with its bracing air to sharpen our appetites, followed by a banquet to satisfy those sharpened appetites.

Resolved, That we thank the Denver and apicultural press for their effective help.

Resolved, That we express our appreciation of the courtesy of the authorities in allowing us the use of the beautiful Hall of Representatives.

Resolved, That we return our thanks for the instructive and entertaining lectures of Messrs. Gillette and Root, and for the music we have enjoyed.

Resolved, That we tender our thanks to Messrs. Wm. Bomgardner, Robt. Orr, James Smith, and the Fruit Growers' Association of Grand Junction, Colo., for their generous donation of some of the choicest fruit of Mesa county; and to the Arkansas Valley Bee-Keepers' Association for the brotherly cordiality shown in their present of some of the famous melons of Rocky Ford.

C. C. MILLER,
J. A. GREEN, *Com.*

Two of the foregoing reports were given at the short meeting held just preceding the banquet tendered members of the convention on the last evening.

(The End.)

Contributed Articles.

The Need of a National Honey Exchange.

BY PROF. A. J. COOK.

I HAVE been asked to give my opinion at length on the matter that came up at the recent National Convention at Denver. I am glad to do so as I have thought a great deal about it.

As I read the signs of the times there are two tremendous movements now on foot; tremendous in themselves, even more tremendous in their promises and influences. I refer to Consolidation and Co-operation.

Consolidation is in the very atmosphere. Hardly a day passes that we do not hear of the formation of another gigantic trust. These bring with them so much of good policy, wisdom and economy that we can never hope to say them nay. All must admit that were all people generous, unselfish, and possessed of the Christ-spirit, trusts would be wholly a blessing. Trusts imply organization, and so we find all the great commercial interests thoroughly organized. Even where they have not yet consolidated into trusts, they are almost invariably organized beyond their mere corporate limits. They pool their interests; at least they work with an understanding that though not so potent to aid as when developed into the real trust is yet very full ı helpful influence. Thus co-operation is wider and more general than consolidation. Unwritten co-operation is wider in its reach than most of us even dream. In all our towns or cities three or more meat or milk carts traversing the same street show how consolidation would ply a helpful oar. Co-operation is already at work for all sell at the same price, and each, if rational, regards the interests of the others. The fact that livery hire in a large city is precisely the same at each stable for like service shows how co-operation is reaching out everywhere. Uniform sleeping-car rates, and the nickel car ride, are further evidence. We cannot make all people generous and unselfish. We can hope for such in the future, but we see a long stretch between us and that.

WHAT CAN WE DO?

We can all organize and co-operate. That is what we must do. That is to be the grand consummation of the present century. The Magna Charta, Bill of Rights, Habeas Corpus, French Revolution, our own blessed government, none of them came easy. Each was born of great effort, struggle and hardship. Each came with blessing to the common people.

Co-operation among all classes implying very thorough organization will force men to do what unselfishness would do of its own volition. Our laboring classes will never secure their rights and a fair share of the world's fruits, or a right recompense for their labor, until they are all thoroughly organized and able to act as a unit. This time must, will come. If we are wise and right-minded we will all wish to help it on.

The recent serious coal-strike would be even more deplorable except as it will surely help to usher in this good time of universal organization of labor. One man, or even the craftsmen of one mine or factory, can never stand even, with capital massed and united as it is. All must combine. All will combine, as "ever the right comes uppermost, and ever is justice done." This so long as we have a greedy, selfish world is the laborers' only hope.

It will come slowly, and may take very long, but come it will.

God speed the day.

DOES THIS BODE DANGER?

Some will say, "Alack the day. Labor is ignorant, impulsive, uncontrolled, savage. With the reins in her hands there will be rough driving." I have no fear. I believe we are as safe, very likely safer, in the hands of the humble toiler as in the grip of the capitalist. The present strikers are recently from the poorest and most ignorant of Europe's lowest peasants. Yet for the most part how self-controlled has been their habit even under the most trying of circumstances.

FARMERS LAST TO ORGANIZE.

The farmers, including bee-keepers, are dependent, but not as dependent as are the general laborers, so they are not as certainly oppressed nor do they feel the hand of co-operation and consolidation as do the trades-union people. Yet with high freights and poor market they feel pressure that can only lighten when they, like the capitalists, and the trusts, have potent voice in the output and the value that shall be placed on it. How tremendously the farmer is interested in the development of markets, in wide and wisest distribution, in the curtailment of unfair competition. Yet at present how utterly unable he is to exercise control in any of these lines. His products are unique in being staple; they are very necessities, and so they and their producers should exercise a leading control. This grand consummation is coming. We can all help to hasten the glad day.

ORGANIZED CO-OPERATION, POSSIBLY CONSOLIDATION, THE SOLUTION.

In the very successful working of the Southern California Fruit Exchange we see the very successful forerunner. Half of our citrus groves have already combined and done a business of $30,000,000 in less than nine years, and nine million in one year, and yet have sustained almost no loss, less than one-fortieth of one percent Even its enemies admit its marvelous success, and that it has served the citrus industry very greatly even if it has not been its salvation.

Our orange-growers were far from markets, freights were exhorbitantly high, competition with Sunny Italy with short distance and cheap transportation was terribly severe; except from the wise management of interested salesmen the industry would have been swamped. On the shoulders of the Exchange it has risen from the ashes of a red-ink decadence to perhaps the most prosperous rural industry of the country. There is no reason why apiculture and other branches of farming may not reap similar benefit. Of course, if they are less concentrated in locality, and have not so intelligent a contingent, they must wait longer for this good fruit.

HINDRANCES TO SUCCESS.

There are serious inherent obstacles to rapid success in these directions. Our farmers, including apiarists, are isolated. They are generally unacquainted with the methods of trade, in these stirring times; they are suspicious, and fear to trust others; they often are very slow to give their products into the hands of others to handle; in short, reluctant to do what the successful railroad and factory must, and safely do in their operations. Our farmers must be educated to see the necessity, safety and great wisdom, of course. It will not be the work of an hour. Such experience, however, as that of Southern California Fruit Exchange is a valuable object lesson and a quick teacher. Are not our bee-keepers sufficiently educated to organize in like way? And thus become the second teacher in this great school of advanced and improved methods of business.

A second embarrassment comes from the need of first-class management. These combinations do a tremendous business. This requires great integrity, push, business sense, and breadth of mind and judgment. Such qualities are not lying around hunting for employment, and must be patiently sought for and generously recompensed. Railroads appreciate this fact and act accordingly. Farmers are not likely, from their very life habits, to appreciate such business character rightly, are slow to acknowledge its rarity, and are reluctant to recompense it as do other lines of business. This is certainly a grave obstacle but must be pushed aside, with more time and wisdom. Our people must recognize the value of business judgment, and must be willing to pay for it. A simple exercise of superior business instinct may win or save many times a high salary. How short-sighted, then, to refuse it when large interests are involved!

A MENACING COUNTERPART.

A threatening companion of this wise, competent manager is his cupidity. He may so fully appreciate his own value that he himself will put an enormous price upon his service. California has already suffered in this way. Mr. Kearney, of the Raisin Combine, won a very large success the first year of the organization. He was paid a very large salary. No doubt it might have been better to have retained him even at a much larger salary. It is not strange, however, that the farmers chafed under a proposition to increase the recompense largely. It has seemed strange to me that men cannot be broad enough to see that there is glory in such service far beyond the value of money. I should suppose that Mr. Dennis Kearney, and the fine business men that have helped to bring the Southern California Fruit Exchange to such tremendous proportions and to such gratifying success, would take such pride in their achievement that they would be more than content, and would be the last to jeopardize the further success by any proposition of higher remuneration. I can but believe that men will be raised up who will not only be able to push this work to its highest accomplishment, but will also be more than willing to accept salaries that will be tolerated, without irritation, at least, by our most wise and progressive farmers.

With this as an introduction I will leave the subject for a time, when I will outline what seems to me, in view of the experience already enjoyed in Southern California, may be adopted in the marketing of our honey product. I have a hope—not over sanguine, I must say—that with our excellent bee-papers and wide-awake, intelligent bee-keepers, we may commence a work of education that will soon bring us a honey exchange in California if not in the whole country, which will rival in interest and value that of the Southern California Fruit Exchange. There is every reason to believe that Arizona, Utah, Colorado, and very likely several other States, will quickly fall into line even if they do not lead California in this new enterprise.

Los Angeles Co., Calif.

Pear-Blight and Sowing for Bee-Pasture.

BY J. E. JOHNSON.

I AM enough of a fanatic to be cranky on two things. The first is pear-blight, and second, sowing for bee-pasturage. I have made pear-blight a study for years, have an orchard of 900 trees, and not the slightest trace of blight, although neighbors around me have blight, some orchards being nearly ruined by it. Some might think me wild to run up against such a high fence as the authority of Professors Cook and Waite, but I ask for nothing better than a severe criticising from either, as I believe I have my thumb on the blight question, and can prove them both to be on the side-track. A Stray Straw in Gleanings says Kieffer pears were fine this year from trees which bore worthless fruit last year. They were not good last year because the trees did not contain enough blossoms to attract bees from other trees. Kieffers do not fertilize themselves sufficiently to make perfect its fruit, but will set fruit well unaided, but some fruit will always be ill-shaped, and not good, (hence the grading of Kieffer from 0 percent to 100 percent.) We have had ripe pears to eat from July 15 until winter; many trees were white with blossoms, and not one twig of blight.

Now I am going to criticise Dr. Miller, just a little. Catnip does not grow better in the shade, nor as well as it does in the full sunshine. It grows in hedges because of leaf-mold and protection from the tramping of stock, not because of shade. I had patches this year in places where old brush-piles had been rotted down in the form of a wash-pan inverted, from 3 to 7 feet high, thick and thrifty, and alive with bees every day, wet or dry, providing it was not raining or too cold for the bees to work. Now, from what I know of catnip (not so very much), I would say that ten acres, in addition to the other honey resources we have, would, in most seasons, give us a good crop, whether it was a wet or dry season. Without catnip, the same seasons we would sometimes get no surplus, because the flow from clover comes in jerks, (it is now you have it and now you don't have it). I have figured it thus: If you go over a white clover pasture and find one bee to every 10 feet square, on an average, all through its bloom, would not that be about right? Now I have seen 50 or more bees, as near as I could count, on 10 feet square of catnip, in these same old brush-piles, right in the sun. Now, according to this, 10 acres of catnip would equal 500 acres of white clover, besides catnip yields wet or dry, nearly all summer. Is it possible bees would work so eagerly on it if it did not yield well, and of good quality?

I have one acre sowed in catnip, slightly mulched to protect the young plants from the heat of the sun until well rooted, when it will be able to look after itself, so I shall be more able to know about this matter.

I began to sow seeds of different honey-plants nearly 20 years ago, but only in waste-places, and during this time I have lived in different parts of Illinois, as well as in Kansas, but I now have a nice little home of my own (80 acres of land). I will send you a picture of it this summer, if I live, as well as some of our fine Spoon River scenery, and I shall try to sift this matter of bee-pasturage to the bottom. Our great bee-men have done much in solving questions in bee-keeping, but did any bee-keeper east of the Mississippi River ever try any honey-plant in sufficient quantity to know any thing about it? Or at least to judge of it, that is, for honey alone?

Now, with me, white clover always yields in dry weather, if we have the clover, but this is the way it works: When real dry we have not the clover; when real wet it does not "give down." I do not know which is the best, but sweet clover is a stand-by, unless extremely wet. Alfalfa is so closely related to it that I am positive it will act much the same, from what I can learn of it in the West. I was visiting in Kansas last fall; their soil is sandy, and the roots will soon creep down 8 or 10 feet in the ground; but here it may take several years to become adapted, but when it does you may be sure it will not disappoint us; it is not, however, a low-ground plant.

Bee-pasturage east of the Mississippi River is the greatest unsolved question in bee-keeping, and notwithstanding all arguments to the contrary, I shall work at this one thing. It would mean much for many bee-keepers who have had failure after failure. Knox Co., Ill., Dec. 16.

Why Not Help a Little—both your neighbor bee-keepers and the old American Bee Journal—by sending to us the names and addresses of such as you may know do not now get this journal? We will be glad to send them sample copies, so that they may become acquainted with the paper, and subscribe for it, thus putting themselves in the line of success with bees. Perhaps you can get them to subscribe, send in their dollars, and secure for your trouble some of the premiums we are constantly offering as rewards for such effort.

Can Good Queens Be Reared by a Cupful of Bees?

BY HENRY ALLEY.

DURING the hot political times that followed the Civil War, a Union general by name of Kilpatrick stumped the State of Masschusetts for the Republican party. General Kilpatrick was a fine speaker, and drew crowded houses wherever he spoke, and in every speech he made, he so framed his remarks that when a certain part was reached some one in the audience would ask a certain question, "Ah," General Kilpatrick would say, "I wanted you to ask me," and then the interrogator got a quick reply. Now I have no intention of making a political speech, as I am not a politician, and never was, yet I had an idea that all my statements would not pass unquestioned, as they are so at variance with the experience of many other bee-keepers.

Even the Editor could not permit some things to pass without a question. That's right, express your opinion; I'll find no fault. I am more than glad that some one has given me an opportunity, and an excuse, to say more on the subject of queen-rearing. On page 707, I am quoted thus: "As fine queens as any one should desire can be reared with a cupful of bees, and as poor queens as ever lived may be produced by a bushel of bees;" and then the Editor says: "Unless he means that the cells are to be reared in a strong colony."

No, I don't mean to say the cells are first reared in a strong colony. I have seen good queens reared by a few bees, and the meanest queens ever reared by the strongest colonies. But the queens in both cases were reared under quite different circumstances. When the few queens reared their queen, the honey-flow was at its height; when the bushel of bees reared the poor queens they completed their cells over an excluder—had a young queen in the brood-chamber—and the flow of honey had ceased, but the bees were liberally fed all the time cell-building was going on.

The cupful of bees were queenless, and wanted a queen; the bushel of bees had a good queen, and were in no need of another one. Does the reader see the point? Isn't this argument in keeping with what I have said in this Journal about rearing queens above an excluder while the bees had a queen, and a colony in a normal condition?

No, I did not mean any one to understand that the cupful of bees merely kept a few queen-cells warm that other bees had completed. The few bees did the whole business, from the egg to the fertile queen.

Excuse me if I partially repeat what I once said in this argument on queen-rearing. All the readers know that I use for nuclei a small-frame hive or box. The frames are about 5x5 inches square. Well, these little colonies can be brought up to a high state of prosperity, as they gather honey and pollen just the same as the large colonies of bees, and the queens fill the combs solid with brood. Now, when a cover is taken from one of these little hives, and the beautiful golden-bees are exposed to view, I tell you that they present a beautiful sight. Ask Arthur C. Miller if this is not so. He has seen them many times in my apiary. All my queens are fertilized in these miniature colonies.

Now, perhaps I have made this system of nuclei more of a success than some other people could. At any rate, the system is a success with me, and has been for nearly 30 years.

I allow the queens to remain in the nuclei from one to three weeks after they become fertile. By that time the combs are solid with brood, and in cases where a queen remain in a nucleus 3 weeks, young bees are hatching from her eggs, and thus a queen is tested for her purity, or impurity, as the case may be, and the little colony is in pretty good condition to rear a few queens.

Now, don't you think that if the queen is removed from one of these little colonies when in the above condition, the bees will rear as good a queen as can be reared by any process we know of? Well, I never reared queens in the above way, but when queens are so reared they are good ones.

Now, when I remove a queen from a nucleus in such a condition as above described, and a virgin queen is given the bees and destroyed, and the fact not known until about the time the fertile queen should be found laying, but instead of finding a laying queen there are more or less queen-cells, would you preserve or destroy such cells? Wouldn't you cut them out and make an effort to save the young queens? I certainly do in all cases. I now have in my apiary 20 as fine queens as can be found in America, and all of them were reared by the process just given—they are a sort of come-by-chance queens.

The first week in September, 1902, I had no virgin queens to give nuclei. One fine fertile queen was removed from one of these little boxes, and the bees given a chance to rear a queen. One cell was built, and from this cell I got a beautiful queen. In due time this queen was fertilized, and as she was so large, beautiful and well-developed, I have taken special pains to keep her through the winter.

Let me tell a little story here that in a way illustrates the difference there is between one best queen that ever was, and a still better one: Until within a very few years all the farmers here in New England used oxen on the farm, and every farmer was very proud of his animals. One old farmer was exhibiting his oxen one day to a neighbor, and of course had to speak of their good qualities. "Well," said the farmer, "that off ox is the best ox I ever see, and the nigh ox is a blamed sight better one than he."

That is just the way we feel about our favorite queens. The fact is, I cannot say sometimes which of the good queens are the best in the apiary. However, I will tell the readers of this Journal what I got from one of the little 4-frame nucleus colonies. A very large, fine queen was removed from a 4-frame box, and a virgin queen introduced at the proper time. Two weeks later I went to the above hive expecting, of course, to find a laying queen, and one all ready to mail, but instead of a queen I found 4 large queen-cells. They seemed to be so promising that they were removed and the young queens allowed to hatch out, and one of the queens seemed to be very much better developed in every way than the other three, and her great beauty and prolificness caused me to keep her until I could test her—a thing I did pretty thoroughly, too, before the season was over. One thing I did was to rear 400 queens from her eggs, and all her progeny proved as good as herself. This particular queen will spend her days in my apiary, and I would not think of selling her for $100.

How this statement will make Editor Hill, of the American Bee-Keeper, jump! Mr. Hill does not think any queen is worth $100. I do; and I know the full value of a good breeding queen, and I think there are many queen-dealers who appreciate the value of a good queen.

One point more and I am done: One of the readers says I put the percent of inferior queens sold too high, when I set it at 90 percent. My remarks were based upon my own experience. Once in a while I purchase a queen of some one who advertises his stock on the sky-rocket plan. I will say that I have never been fortunate enough to get a good queen from any source. It is only justice for me to say that I never purchased a queen of Mr. Doolittle, A. I. Root Co., nor W. Z. Hutchinson. And, further, no strain of their bees was ever in my apiary. The only strain I now have is the Adel, except a queen a man down in Alabama sent me in August. He says the queen was reared from imported stock. I am inclined to think she was so reared, as nearly all her worker progeny are black.

By the way, why do people send to Italy for queens? Do those people expect to get better queens than American breeders can rear? Why, one man in California wrote me in August that he bought 8 queens from a dealer in Italy, and not one of them filled out two frames with brood. Dr. Gallup should hunt this man up and "go for" him. Such a queen-dealer needs a good deal of "doctoring." I am glad that Mr. Doolittle and myself can do much better than the Italian queen-dealer. We get that much credit from Dr. Gallup.

Essex Co., Mass.

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

Shaken Swarms in the South.

Mrs. Sarah A. Smith, in speaking of shaken swarms, says in the American Bee-Keeper:

"I have used the method for ten years, and in some cases nothing answers better. But when you hear some one say, to brush all the bees off the combs and set them aside until enough young bees hatch out to take care of the brood, then you should use a little of your own common-sense, and do nothing so foolish. At least that is what it would be if done here.

"Every natural colony of bees I have ever examined always has brood in all stages of development. Now, if you take all the bees away the brood must suffer before enough young bees will be hatched out to go on with housekeeping. And is it well to keep food from the unsealed brood for so long?

"Then, even in our warm climate I do not believe it would be warm enough for the brood. And last, but not least with us, just as soon as the combs were freed of the bees, the ants would start in and clean out all the brood and honey."

Dropping the Bee-Paper in Winter.

Editor American Bee Journal—

I received the notice last evening that my subscription to the American Bee Journal expires the last of this month. When my time is out will you kindly stop it until next spring? The winter is the only time I have to study, and I am very remiss in my bee-knowledge, and I want to study my "A B C of Bee-Culture" and also Prof. Cook's "Manual of the Apiary." I have had them both for over two years, and know but very little that is in either one.

The Bee Journal is all right, and I would not be without it when I am in my apiary, for every week there is something in it that I want to know about. But this winter I want to study my text-books.

I have 54 colonies; they went into winter quarters in good shape, very strong. I will divide them in the spring. We had a very good honey season this year.

I like the Bee Journal very much, and I will read my last year's book all over this winter. Mrs. Subscriber.

I read "Subscriber's" letter over with a feeling of genuine regret. I fear you are making a big mistake. Your text-books you have with you, and you can study them whenever you have a little spare time, but if you stop your bee-paper that is so much that is lost entirely, and a single number may contain just the information that you especially need, and that single number may be worth at least ten dollars to you. I should certainly want my bee-paper every week, and put in whatever spare time I could find on my text-books. As I said, they will keep, and you are sure you are not going to miss what is in them, although it may take you a little longer to get through with them; but if you stop your bee-paper, that is so much gone for good. That is the way I should feel about it.

Surely, the long winter evenings, more than any other time of the whole year, ought to afford leisure to become familiar with the fundamental principles taught in the text-books, and at the same time to keep pace with the advance chronicled weekly in the "Old Reliable."

Ants and Clipped Queens.

Here is a bright and breezy bit of an article written by Mrs. Sarah A. Smith, of Florida, in the American Bee-Keeper. She says:

"A funny thing happened to me last spring. I read, one evening, G. M. Doolittle's article on clipping queens, in Gleanings in Bee-Culture, and as each point in favor of clipping came up, I, like the three good school trustees, nodded my head and thought, 'Them's my sentiments, too,' and rather patted myself on the back and thought, 'Sally, aren't you glad yours are all clipped?'

"Well, next morning my daughter reported a swarm. I went out and looked to see where it had come from, and soon I found the hive with the queen in front dead, with about 100 meat-eating ants stinging her and trying to move her to their nest. I looked and thought of the evening before, and could only sit down on a hive and laugh. As you perhaps know, Mr. Editor, such subjects for merriment are the only ones we Florida bee-keepers have had for some years.

"I still believe in clipping all queens, but scald your ant-nests before swarming-time."

Of course, conditions are somewhat different with us in the North. We are not troubled with ants as they are in the South.

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The Afterthought.

The "Old Reliable" seen through New and Unreliable Glasses.

By E. E. HASTY, Sta. B Rural, Toledo, O.

NEW BELGIAN DOCTRINE OF FOUL BROOD.

I am not going to rage and pitch on the subject, nor to be "Hasty" in any extreme way, but as to the new Belgian doctrine about foul brood I just quietly don't believe it. We happen to have evidence that the very highest of scientific authorities sometimes disagree point-blank on bacterial matters. We shall hear in due time, from some institute just as high up, that *bacillus mesentericus vulgaris*, alone and of itself, is not capable of starting a case of foul brood. It occurs to me as possible that the real *bacillus alvei* may have escaped observation hitherto. Observers *looking at* b. m. v. while another and smaller microbe was doing the mischief. In a number of diseases pretty well known to be germ diseases it is freely confessed that the real germ cannot be shown as yet. If we may suppose the same foul brood it will help us out of our present trouble, and assist in some old ones, also. We have been told pretty authoritatively in the past that there was little or no danger of infection by means of honey—while practical experience is peremptory and positive that honey is the *main* means of infection—communicates the *real* microbe of the disease, but not the Belgain chap with long name, mayhap. Same (in the opposite direction) of the question whether beeswax communicates infection or not—the laboratory says yes, and experience says no.

The great majority of high authorities say human beings can take the tubercle bacillus (consumption) from the cow; but Prof. Koch, of Berlin, the highest single authority of the lot, denies this, and sticks to it like a Trojan. Don't be in a hurry to throw overboard all your previous scientific lessons at one little heave of an adverse sea. Page 787.

OLD BROOD-COMBS.

As to the dispute alluded to on page 755 there may be a solution yielding somewhat to both parties. There are old black combs *and* old black combs. If they have never been allowed to get filthy and moldy, and then dry as bones, mere blackness and a little extra weight doesn't harm them any for use in the brood-chamber. Manifestly they should be warmer and tougher. The cocoons and adhering nitrogenous matter do not accumulate forever, but are torn out from time to time. This serves as salad to go with the too exclusive honey-diet of winter. But a heavy old comb once permeated through and through with the fibers of mold, it may well be that such a one is never again quite as highly esteemed as a new comb would be. The mold fibers do not die, probably, but are always in there waiting for a chance to do more harm. Quite likely in some apiaries pretty much all the black combs have been at some time too badly damaged to recover fully.

PUTTING UP HONEY FOR RETAILING.

Five cents for honey and fifteen cents for other things, eh? What if thy brother, misled by the figures, should eat the other things and leave the honey? Or suppose that you yourself lived a double life in the style of A. I. Root; would you put up honey that way in your country home to be used by yourself in your city home? And where does the Golden Rule come in? All right to supply the small demand of those who really want that sort of thing. Then let's turn in and do what we can, in the best way we can, for the great mass of the people. Page 758.

GRANULATED HONEY FOR THE MARKET.

As for Mr. York (Perhaps you're heard of him), when he says he don't believe in feeding all creation with honey, one begins to feel that his denial of being an Irishman can hardly be accepted, he gives away his cause at such a rate. Further on, where he intimates that it is not pleasant to spend the hours explaining to everybody that our honey isn't sugar, nor lard, nor yet goose-grease, why, then he gets in a good weighty shot. But honey granulates in glass as well as elsewhere. And the rogue who adulterates will have his stuff looking well for the longer period—and so please the grocer. Some hard old facts we have to face in this hard old world. The man who'll invent a satisfactory way to control swarming, and the woman who will invent a satisfactory way to control granulation, they shall be king and queen among we'uns. Page 759.

GETTING FINE GRANULATION OF HONEY.

If I understand Mr. Coggshall rightly on page 760, it is a deft and valuable kink he is giving us. Honey well stirred just at the time it is beginning to granulate will have a finer grain and seem nicer to the palate of the eater. I think that's so. Presumably the stirring makes granulation proceed so rapidly that the granules do not have time to get big and coarse.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

Swarms Deserting Hives.

A neighbor of mine says that when he kept bees, and was ready to hive a swarm, he would first wash the hive thoroughly with salt water, and then hive the bees; and said he never had a swarm leave when he hived it in that way. What do you think of it? NEW YORK.

ANSWER.—Washing out the hive with salt and water is an excellent thing, if the hive is dirty. It might do just as well without the salt. If the hive is clean, it may do as well without any washing. The principal precaution against having a swarm desert a hive is to see that the hive is well shaded and ventilated. You can wash a hive in an ocean of salt water, and if you set it in the hot sun with a small entrance a swarm will desert it.

◆

Dr. Gallup's "Umbilical Cord," and Baron M. Lieawful.

Please tell us what you think of Dr. Gallup's umbilical cord, and of Baron M. Lieawful? INQUIRER.

ANSWER.—Having never seen Dr. Gallup's umbilical cord, I am hardly competent to give an opinion of it. Neither can I say with any degree of certainty whether the experiments of Baron M. Lieawful, as reported on page 829, would have precisely the same results in some other locality. Indeed, I have some little doubt as to the entire accuracy of some of the Baron's observations. A man who could be so careless in the use of scientific terms as to write "pupaskinna castoffica" instead of "pupaskinnæ castofficæ" is not entirely free from suspicion as to errors in other respects. He is also unpardonably careless in speaking of a queen as being "full of years" after having had 299 lives injected into her. She was full of *lives*—indeed, very full—but in scientific parlance it will hardly do to consider *lives* and *years* as synonymous. I dislike very much to say anything calculated to injure the Baron in any way, but I feel called to utter a word of warning against accepting all that he says with too implicit confidence without having the same things repeated by him or some other person in a different locality.

◆

Bees Gnawing Through Paraffine-Coated Material.

1. I have read somewhere that bees will not gnaw through any material coated with paraffine. I fancy it would be an easy matter to coat the under surface of cushions to be used for covering hives by giving the material a free sprinkling with paraffine shavings and then going over it with a hot smoothing iron.

2. By the way, if a bee can make a hole through duck and through building-paper, as it seems to me a bee can do, how is it that it cannot break through the skin of a grape? ONTARIO.

ANSWERS.—1. That bees will not gnaw through any material coated with paraffine, is a thing that in the language of the newspapers "needs confirmation." At one time I tried covering sheets with melted propolis to prevent the bees gnawing them. Whether the bees would gnaw it I never learned, for I did not make a success of distributing the propolis. If I were still using sheets or cushions I should at least try the paraffine.

2. Conditions are different. If a sheet of tin were lying before you, you could easily take hold of it with one hand and lift it. Suppose that sheet made into a hollow sphere twelve inches in diameter; you will find yourself powerless to lift it with one hand, because there is nothing you can grasp. The bee is just as powerless to take hold of a grape as you are to take hold of the polished sphere. It can, however, easily get hold of the threads of duck or the particles of the paper. But varnish the surfaces and the case is different. I formerly used enameled sheets in quantity. I doubt that a bee ever gnawed one unless the surface were first broken, or unless it could get at the edge of the cloth. The only question I should have about the paraffine would be whether it would not be so soft as to yield, as the skin of a grape will not.

◆

Candy for Winter Feeding of Bees—Space Over Brood-Frames—Width of Top-Bars.

1. Which is better for winter feeding of bees wintering out-doors, hard candy, or "Good" candy? and how should the "Good" candy be fed?

2. What do you consider the "exactly right" space over the brood-frames?

3. What width of top-bars do you prefer' 1⅛ or 1 1-16? or is there any practical difference? I expect to make a number of hives this winter, and want to get them right. MICHIGAN.

ANSWERS.—1. Feed "Good" candy in cakes laid over the top-bars.

2. One-fourth inch is probably about right.

3. I am using 1⅛-inches with good results.

◆

Wintering Bees Outdoors—Dividing for Increase.

1. I have 15 colonies of bees, and have made a place for them on the south side of the building, and covered it with straw. Will it do to leave the south side open, or shall I close it? Which will be best?

2. How about dividing bees in the spring instead of letting them swarm? I read in Prof. Cook's "Bee-Keepers' Guide," to cut out a queen-cell and put it in the nucleus. Why can't I take a whole frame with a queen-cell and put it in the nucleus? IOWA.

ANSWERS.—1. Perhaps both. Close it partly, but leave plenty of chance for the bees to fly whenever a warm day comes. Better have it open entirely than to close it too much.

2. It may be all right to take a comb with a cell on it, providing the cell is in the right place. But quite commonly queen-cells are on the edges of the combs, and that would not do so well, for there is danger that the cell may be chilled. It should be centrally located, where it will be sure to be kept warm by the bees.

◆

Making and Using an Observation Hive—Mice in the Bee-Cellar.

1. How can I make an observation hive, that is, the exact size, the inside and outside measure?

2. When I have the observation hive ready, I will take a frame with wired comb foundation, put that in the hive, then I will hive a little swarm in it. Do you think this swarm will stay there and begin to work? You may say, "Take a comb with bees from another hive and put in the observation hive." But I do not want to do that.

3. Do you think an observation hive with one frame, full of bees, will winter all right? or do they need feeding? If so, when shall I do that?

4. I have about 20 colonies of bees in the cellar, with hive-entrances about ⅞ of an inch wide, and the full length of hive; there are some mice in the cellar. Do you think they will hurt the bees? Would they destroy some colonies? or what do you think about? MINNESOTA.

ANSWERS.—1. There is no one size. You can make it any size you like, but the size should correspond with the size of the frames used. If a single frame is used, the inside dimension should be enough longer and deeper to allow a bee-space of one-fourth inch or a little more all around the frame, and perhaps 2¼ inches in width. The outside dimension will follow itself. If your frame is the Langstroth, make your observation-hive of the same dimensions as your regular hive, only make the width about 2¼ inches.

2. Yes, if the temperature and ventilation are all right, I think they may succeed.

3. I think success would be doubtful; but there is no law against your trying it.

4. It is not likely that any colonies will be utterly destroyed, but the mice will do a good deal of mischief by gnawing the combs. The entrance of each hive can be closed with wire-cloth having three meshes to the inch. That will keep out the mice without obstructing the passage of the bees. It is not so well to lock the barn after the horse is stolen, and yet it may do some good to close the entrances now. If a mouse is imprisoned in a hive, it may do less damage than to have free run of all the hives.

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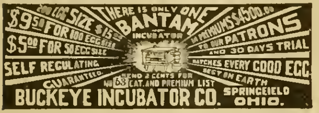

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FROM MANY FIELDS

House-Apiary for 80 Colonies.

Please suggest any plan for building a house-apiary to accommodate 30 colonies for comb honey. What are the advantages and disadvantages of such a plan over wintering on the summer stands? John P. Tull.

Philadelphia Co., Pa.

[Will some one who has had experience please answer Mr. Tull? We should be pleased to publish not only a full description, but also pictures showing inside and outside of the house.—Editor.]

Not a Good Honey Season.

The past season was not a very good one for honey, too cold and wet. I had to feed the late swarms; the earlier ones gathered some surplus.

The prospects for a honey crop next year are good; there is an abundance of white clover and thistle. G. C. Allinger.

Marion Co., Ohio, Dec. 9.

Season Almost a Failure.

The past season was a bad one for the bees in this locality, all on account of too much rain. They did not store any honey in the summer, but in the fall stored enough for winter, and I took off about 200 pounds of white honey in one-pound sections.

This is a good location for bees, as there are hundreds of acres of prairie-land, and vervain grows abundantly, and there is some white clover, but this year it was flooded nearly all summer. The prospects are good for next year. C. J. Sittler.

Henry Co., Ill., Dec. 9.

A Young Queen-Breeder, Etc.

We have the youngest queen-rearing boy in the United States. He will be 13 years old next February. He understands his business all right. His name is Thomas Judd Holgate, and his bees are in good shape for winter. He will become a member of the National Bee-Keepers' Association Jan. 1, 1903. If there is another boy or girl of the same age that does as well I would like to know their whereabouts.

I notice that my name is mentioned for one of the Directors of the National Bee-Keepers' Association. If I am elected I will do all I can for the interest of the Association and the bee-keepers. I think Utah is entited to one director. January 1 we will have 12 members in a little less than six square miles. I have been working for the Association for the last two years, and I expect to make it win before I quit.

Bees are in good shape for wintering. I have mine put away nicely.

G. W. Vangundy.

Uiuta Co., Utah, Nov. 22.

Tincture of Arnica for Bee-Stings.

As 1902 is about to expire, I take pleasure in renewing my subscription for the American Bee Journal. I consider I have had very good value for my money in the American Bee Journal—one thing alone—the use of

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Agencies: Trester Supply Co., Lincoln, Neb.; Shugart & Ouran Council Bluff Iowa; Chas. Spangler, Kentland, Ind. 12E26t

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tincture of arnica, which some one advised for taking pain out of stings—has been of great benefit. I am one of those people that a sting gives considerable trouble, quite a lot of pain and considerable swelling. Tincture of arnica gives great relief to me, but I will say that an application of tincture of arnica to the sting, followed by another immediate application of tincture of myrrh, both applied as soon as possible after being stung, have given me so much relief that in three minutes after being stung I would never know from the feeling that I had been stung. Both liquids are very cheap.

About 18 years ago I was stung on the back of the neck on a vein. I reeled and fell to the ground in a very few minutes; they had to make quick work of getting a doctor, as I was commencing to get cold in the legs. The doctor advised a liberal application of whiskey on the inside, and I took two good, stiff glasses of straight whiskey, and an outward application of ammonia. I never felt the effects of the whiskey in the way of making me feel drunk in the least. I have had to use this treatment twice, both times by the advice of different doctors, but I am not an advocate of the use of intoxicating drinks in any shape or form, as I consider them a curse to humanity. W. D. HARRIS.

Ontario, Canada, Dec. 23.

Wild Cucumber—Bee-Escapes.

On page 755 I notice an article about wild cucumber as a honey-plant. There are two kinds growing here, but one kind the bees do not work on; it has two seeds in a pod, and only blooms two weeks. The other kind the bees work on freely, and it blooms all summer. The seeds grow in a cluster of six or seven, unprotected, only covered with fine stickers. Any person wishing to get acquainted with them can come here and take a walk through the corn-fields and the river-bottom. They introduce themselves. The honey from them is white and of good flavor.

I received a Porter bee-escape about six weeks ago, gave it a good trial, and have found it is impossible to get along without it, after one knows what it is, and how easy it makes the work. I did not use the smoker when I took off the honey, and I did not find one bee in the super. P. H. HARBECK.

La Salle Co., Ill., Nov. 31.

Report for 1902, Etc.

My report for 1902 is not very good. From 36 colonies of bees, all in good condition, I got only 1000 pounds of extracted honey. The summer was too cold and rainy. In 1901 I got over 3600 pounds from 29 colonies.

I am not in favor of the Constitutional Amendment proposed at the Denver convention of the National Bee-Keepers' Association. It seems to me that the question of locality of an officer ought not to be raised. I regard all the bee-keepers of North America as one family, and it can not make any particular difference in what particular town or State such officer resides. What we are after is men well qualified to fill the offices. I understand that this organization is for the benefit of bee-keepers, and not for office-seekers. I would not like to see such wrangling for office as we have in politics. FRED BECHLY.

Poweshiek Co., Iowa, Dec. 7.

Wintering Bees—Improve Winter-Time.

Since Dec. 1 the bees have been confined to the hives. To-day six inches of snow is on the ground, and it is beginning to thaw. We have had zero weather during the last ten days and several nights. To-day the bees could be seen nosing around the entrance inside, pushing out their dead comrades. This denotes that the hive is warm inside, giving the bees a chance to move their position in the hives in reaching their stores, if necessary.

This year I had my bees fixed up during the month of September. All surplus arrangements were removed from the hives and

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put away long before October. Years ago I practiced the plan of letting the frost drive the bees down, by removing the caps or covers during very cool nights. In the morning all I had to do was to go around early and carry the surplus arrangements away to the honey-house. The plan is a very good one, if one is a little careless or negligent, but I find that an up-to-date bee-keeper will "get a move on" him long before Jack Frost comes around.

Years of experience have taught me that the winter is the proper time to make preparation for the following season, by fixing up hives and such things as are needed about the apiary during the summer. To prepare such work six or eight months ahead seems a little foolish to a beginner, but an experienced apiarist will recognize the importance of such preparations by having all his supplies ready at a month's notice, for there will be so much work to attend to during the busy season that no time will be had for such work.

I do not like the sawed-off or short-end top-bar frame. It is all right if the hives are all made just alike, and of the same length. Unless they are made thus it may be the frames will get to "bucking," and one end of the frame will be up or down half of the time. I commenced to use them, but after a fair trial I "fired" them almost as soon as I took them up. Again, bees have a fashion of filling propolis in at the ends. The short-end frames are a good deal like the old metal-covered frame, sooner or later they will be all daubed up; at least that has been my experience.

In advising beginners, I would say that all copies of bee-papers should be taken care of, and then when the busy season is over, or during the winter months. they can be overhauled and looked over carefully. A vast amount of information will be obtained. A blank book should be kept, and whenever the reader comes across a good article that he thinks he would like to refer to afterwards, it should be written down where it can be found—the name of the paper, number of page, etc. Of course, the index at the end of each year would show all this, but I like the blank-book plan much the best, because it contains just what suits the reader's ideas.

Cass Co., Nebr., Dec. 15. J. M. Young.

Small Crop of Honey.

The season for bees in this locality was very poor—too much rain, wind, and cold weather. Some have a small crop of surplus.

Bees, generally, are in fair shape for winter. There was plenty of white and sweet clover, but it was of little use to the bees, on account of the weather. About three weeks of hot weather in July, and the bees swarmed at a great rate. I had 9 colonies in June, and 34 in September; I caught the most of them.

James Godfrey.

Niagara Co., N. Y., Dec. 3.

SHEEP MONEY IS GOOD MONEY and easy to make if you work for us. We will start you in business and furnish the capital. Work light and easy. Send 10 cents for full line of samples and particulars.
DRAPER PUBLISHING CO., Chicago, Ills.

The Chicago Poultry Show is to be January 19 to 24 Inclusive.

Commercial Poultry for Sept. 5, 1902, said: During the Chicago poultry show we shall publish a daily edition of Commercial Poultry, and this we purpose making better than the editions we have published during the last two shows. During the week of the poultry show we shall also tender a banquet to the judges who place the awards on the birds in the show, and another banquet will be given to all winners of first prizes who exhibit three or more birds.

With improved press facilities we shall also add to our artistic force and make Commercial Poultry still more distinctively the leader of the poultry press of the world from the artistic point of view. We shall continue to make our own style and not model after any other publications, and in all its departments make Commercial Poultry better and brighter than it ever has been, maintaining the place it has secured as the leader in circulation as well as literary excellence.

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The thresherman has many reasons, too many to give here. Summed up, it means the model threshing outfit, the best money can buy. You will find the latest catalog on **Rumely's Rear Geared Traction Engines and New Rumely Separators** full of threshermen's logic, argument that convinces. Write us for it. Mailed free.
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41A13t N. L. HENTHORN, box 83, Viola, Wis.

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PAGE
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of a fence is—"How long does it last," and, "How well does it serve its purpose." How's ours?
PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.

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Retail—Wholesale—Jobbing.

I use a PROCESS that produces EVERY ESSENTIAL necessary to make it the BEST and MOST desirable in all respects. My PROCESS and AUTOMATIC MACHINES are my own inventions, which enable me to SELL FOUNDATION and

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Our motto in all departments is "Maximum efficiency at minimum cost."

Our scholastic training is equal to the best, our reputation first-class. All expenses for a year, aside from the clothing and traveling, less than $200.00. Co-education, health conditions, moral and religious influence, superior.

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This is the well-known light-colored honey gathered from the rich, nectar-laden basswood blossoms. It has a stronger flavor than Alfalfa, and is preferred by those who like a distinct flavor in their honey.

Write for Quantity Prices by Freight, if Interested.

A sample of either, by mail, 10 cents, to pay for package and postage.

Order the Above Honey and then Sell It.

We would suggest that those bee-keepers who did not produce enough honey for their home demand this year, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere.

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Complete stock for 1903 now on hand. Freight rates from Cincinnati are the lowest. Prompt service is what I practice. Satisfaction guaranteed. Langstroth Portico Hives and Standard Honey-Jars at lowest prices.

You will save money buying from me. Catalog mailed free. Send for same.

Book orders for Golden Italians, Red Clover and Carniolan Queens; for prices refer to my catalog.

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There was more money made by Farmers and Gardeners in 1902 than in any previous year in the history of the United States. 1903 will equal if not excel it. Good seed is scarce—buy early.

Johnson & Stokes' Garden and Farm Manual for 1903 illustrates by photographs and describes some of the greatest **Money Bringers** ever offered. Shall we send you a copy? It is free. **Sparks' Earliana Tomato** has no competition in the extra early class—enormously productive of large, fine, smooth, solid fruit. Has made more **hard cash** for our customers than anything ever before introduced by any seedsman. Pkt. 20c. oz. $1.00. Our Manual is illustrated by direct photographs and is **free.** Shall we send you a copy?

Johnson & Stokes, 217-219 Market St., Philadelphia, Pa.

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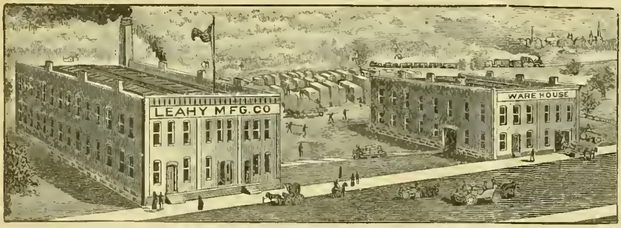

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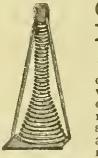

Queen-Clipping Device Free....

The MONETTE Queen-Clipping Device is a fine thing for use in catching and clipping Queens wings. We mail it for 25 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device. Address,

GEORGE W. YORK & COMPANY,
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28 cents Cash paid for Beeswax.

This is a good time to send in your Beeswax. We are paying 28 cents a pound—CASH—for best yellow, upon its receipt, or 30 cents in trade. Impure wax not taken at any price.

Address as follows, very plainly,

GEORGE W. YORK & CO., 144 & 146 Erie St., Chicago, Ill.

BEEDOM BOILED DOWN

Wholesale Marketing of Honey.

B. S. K. Bennett makes in Gleanings in Bee-Culture the following rather surprising statements:

> The great bakery trust in the United States, with factories in each main city, is such an extensive user of honey that they pay their honey-buyer $15,000 a year, or $47 a day. This man does nothing but manipulate the market. How does he earn his salary? It matters little to him how many buyers there are. He sets the price, and sees to it, as has just been demonstrated in California, that no click can get a corner on the market nor on him (this is all private information), but it is what I went into the honey-business to learn. California producers have an offer, through one of the agents of this bakery trust, of 4¾ cts. per pound for all amber extracted honey for a three-year-delivery contract. In good years we rarely get above 3½ cts. Is this a feeler as to our condition? or is it an expectance of an advance in price through the efforts of organization.

Then and Now—Organization.

The editor of the Australian Bee-Bulletin gives a discouraging picture of the condition of bee-keepers in that far-off land, crediting it largely to the big stories that were told of the profits of bee-keeping. His closing words show that organization is in the air, even on the other side of the globe. He says in part:

> "Take some ten years ago, when bee-keeping first became prominent in Australia. What were the stories told about it by persons who wished to avail themselves of a good opportunity to make money by selling supplies? The honey industry was going to excel the butter industry; there was to be more money in bee-keeping than in gold-mining; a square mile of forest and a hundred colonies was an assured income of £200 a year; a hive of bees in the bush would average 250 pounds of honey a year; in the town 150 pounds; it would add so much to the income of the public servants, and occupy but little of their time, and that would be all pleasure. Had there been less "blow" then, the industry would have been in better condition now. How have these beautiful pictures been realized? Not long since hundreds of empty

HAVE RIPE TOMATOES TWO to FOUR WEEKS before your neighbors. Leaflet telling how, and 3 packets earliest tomato seed, for 25c in stamps.

J. F. MICHAEL,
2Etf R. 6, WINCHESTER, IND.

"Bees in Colorado"

I still have several hundred copies of the souvenir with the above title. The bee-papers and a good many people without visible axes to grind have said it is a valuable and attractive thing. If you should like to have a copy, send me a silver dime or 5 two-cent stamps, and I will mail you a copy.

"BEES IN COLORADO" is the title of a 48-page and cover pamphlet gotten up to boom the Denver convention. Its author is D. W. Working, the alert secretary of the Colorado State Bee-Keepers' Association. It is beautifully illustrated, and printed on enameled paper. It is a credit to Mr. Working, and will be a great help in acquainting those outside of Colorado with the bee and honey characteristics and opportunites of that State.—American Bee Journal.

D. W. WORKING, Box 432, Denver, Colo.

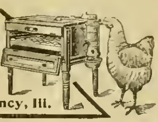
Please mention Bee Journal when writing.

hives could have been purchased all over the colony of New South Wales for next to nothing: almost given away. Bad seasons, decrease of forests, a limited market, lost hope in foreign markets. What is to be done? For those producers who have survived, no matter in a small or large way—to maintain and help the Bee-Farmers' Association—to *work together* honestly and sincerely *for their own good*. Producers should work, and at least once a year do their best to meet, too; if nothing more, talk over the things concerning their welfare, and develop as much as possible a spirit of union and friendship.

Basswood for Frames.

Basswood has been recommended by some as better than pine, while others say basswood is unfit for lumber in hives because it warps and twists so badly. According to G. C. Greiner, both are right, the difference being in timber itself. He says in Gleanings in Bee-Culture:

> In my earlier days, some forty years ago, I was occasionally called on to assist in clearing up and fencing land, all suitable timber being split into rails. The timber was mostly beech and maple, with now and then large basswoods from three to four feet in diameter. These latter we cut into logs twelve or fourteen feet long, and with maul and wedge split them into rails. The logs of some trees split very easily. After starting the end with an ax, two or three wedges driven from the top into the opening would be sufficient to roll the halves apart. The split surface of these half-logs would sometimes be so straight and true that nothing short of a saw could have bettered it. The grain ran true in every way, something like pine; in fact, lumber cut from such trees, as I did in latter years, would fill the bill of pine for many purposes.
>
> Other trees only a few rods from the first, would act very differently—whether on account of different soil or a little difference in the lay of the land, I cannot say; but the fact remains the same, all our efforts to split the logs cut from them would fail. Even the application of gunpowder, blasting-rock fashion, would not separate the halves. The grain of these seemed to wind about the tree—so much so that, in the length of our logs, it would make a quarter revolution; besides, the different layers were so completely braided or woven together that those logs which we did succeed in spliting had to be chopped the whole length before they would separate. I imagine that Mr. Niver's Groton top-bars were made of lumber like the former, and venture the assertion that his confidence in basswood top-bars would vanish like dew before the rising sun if he should ever come in contact with some made of the latter kind.



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Perfect in construction and action. Hatches every fertile egg. Write for catalog to-day.
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46A26t Please mention the Bee Journal.

BOYS WE WANT WORKERS
Boys, Girls, old and young alike, make money working for us. We furnish capital to start you in business. Send us 10c stamps or silver for full instructions and a line of samples to work with. DRAPER PUBLISHING CO., Chicago, Ill.

The Ormas Incubator.—We have before us the new catalog and price-list of the Ormas incubators and brooders manufactured by L. A. Banta, of Ligonier, Ind. While this catalog is not as large nor as gorgeous as some of the incubator concerns are putting out, we doubt if any of them tell the story with more directness than does Mr. Banta's. For a moderate-priced incubator the Ormas is making an enviable reputation for itself. We would advise our readers who are interested in incubators to write for one of these catalogs before purchasing. It is free. Please mention the American Bee Journal when writing.

Catnip Seed Free!

We have a small supply of fresh, clean CATNIP SEED on hand, and will mail **free, two ounces** of it, to any present paid-in-advance subscriber of the American Bee Journal for sending us **One New Subscriber** for one year with $1.00.

Two ounces of this seed will give you a good start of one of the best honey-producing plants known. We will also send to the new subscriber on this offer the rest of this year's Journals free. Address,

GEORGE W. YORK & CO.,
144 & 146 E. Erie Street, CHICAGO, ILL.

Short Seed Crop.—It will soon be the seedmen's catalog time when every good farmer and grower will be expecting to receive the various seed catalogs issued by these enterprising merchants. Among the most interesting will be found the "Garden and Farm Manual" of Messrs. Johnson & Stokes, 217-219 Market St., Philadelphia, Pa. This catalog differs from those offered by any other seedmen in this country, as it is illustrated throughout with handsome photographs taken direct from the vegetables and flowers themselves. This gives it not only a distinction and quality of its own, but gives it an added value to the planter, as he can see exactly as though the vegetable itself were in front of him what the seed which he is ordering will produce. This old firm makes a specialty of introducing sterling novelties, and their success in this direction has scarcely been equaled by any other seed firm in this country. One of their latest introductions, and which has brought them a very considerable amount of favorable comment, is their "Sparks' Earliana Tomato." This has proven to be a novelty of very sterling merit, being the finest, large, round, smooth tomato and coming as early if not earlier than any other known sort. But it, together with nearly all other seed crops this year, is a very short crop indeed, and those wanting it will have to secure their supply early, as there will not be nearly enough seed to fill the large demand that is sure to come for it. This situation also applies to nearly all the early peas, cucumber seed, all muskmelon and watermelon seeds, and beans. A copy of this "Garden and Farm Manual" will be sent free if you mention that you saw this notice in the American Bee Journal.

WANTED WHITE CLOVER EXTRACTED HONEY!
Send sample and best price delivered here; also Fancy Comb wanted in no-drip cases.
THE FRED W. MUTH CO.
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SWEET CLOVER

And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5lb	10lb	25lb	50lb
Sweet Clover (white).....	$ .75	$1.40	$3.25	$6.00
Sweet Clover (yellow)....	.90	1.70	4.00	7.50
Alsike Clover	1.00	1.80	4.25	8.00
White Clover	1.20	2.30	5.50	10.50
Alfalfa Clover	.80	1.40	3.25	6.00

Prices subject to market changes.

Single pound 5 cents more than the 5-pound rate, and 10 cents extra for postage and sack.

Add 25 cents to your order, for cartage, if wanted by freight, or 10 cents per pound if wanted by mail.

GEORGE W. YORK & CO.
144 & 146 Erie Street, CHICAGO, ILL.

Please mention Bee Journal when writing advertisers.

HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, Dec 8.—There is no special change in the honey market, prices remain as last quoted and the volume of sales are not large. The weather is such as usually prevails at this season of the year, and the cold may induce people to buy more freely. Best lots of fancy white comb honey brings 16c per pound; No. 1 to choice, 15c; off grades, 2c to 5c less, and not much demand for them. Extracted, 7@8c for white; amber, 6@7c; Southern, 5½@6c. Beeswax, 30c. R. A. BURNETT & CO.

ALBANY, N. Y., Nov. 22.—Honey market is still in strong position with ready demand for all receipts at good prices. Fancy white comb, 16c; A No. 1, 15c; No. 2 and mixed, 14½@15c; buckwheat, 14@14½c. Extracted, buckwheat scarce at 6½@7½c; light grades more plenty at 6½@7c. Beeswax, 29@30c. H. R. WRIGHT.

BOSTON, Oct. 20.—Our honey market remains firm, with good demand and fair stocks on hand. Honey is not coming forward as fast as usual, and the tendency of prices is steady. We quote our market as follows: Fancy white 1-pound sections in cartons, 16c; No. 1, 15c; No. 2, very light supply, 14c; glass-front sections generally one cent less than this. Extracted, light amber, 8c; amber, 7½c.
BLAKE, SCOTT & LEE.

KANSAS CITY, Dec. 20.—Market steady at quotations. We quote fancy white comb, per case, 24 sections, $3.50; No. 1 at $3.40; No. 2 white and amber, $3.25. Extracted, white, per pound, 7@7½c; amber, 6@6½c. Beeswax, 27@30c.
C. C. CLEMONS & CO.

CINCINNATI, Dec. 8.—The demand for honey, both extracted and comb, has eased off somewhat the past few weeks, however the prices rule steady, as follows: Extracted, amber, in barrels, 6@7c; white clover, 8@9c. Comb honey, fancy, 16@17c; amber, 11@12c. Beeswax, 29@30c.
THE FRED W. MUTH CO.

NEW YORK, Dec. 23.—The market on comb honey is dull and inactive. While the supply is not large the demand has fallen off to a large extent and prices show a weakening tendency. We quote fancy white at 15c; No. 1, 14c; No. 2, 13c; and buckwheat at from 10@12c. Extracted is in fairly good demand; white, 7½c; light amber, 6½@7c; dark, 5½@6c. Beeswax firm at from 28@29c. HILDRETH & SEGELKEN.

CINCINNATI, Dec. 12.—The comb honey market is a little quiet, almost everybody is filled up. As there is hardly any new supply coming in, there is no change in prices, namely: Fancy water-white, 16c; off grades less. The market for extracted white clover shows a slight advance. Fancy white clover brings 8½@9c; alfalfa water-white, 6½@7½c; but amber, if anything, has weakened. I quote same, in barrels, 5¼@5½c. Beeswax, 27@28c.
C. H. W. WEBER.

SAN FRANCISCO, Dec. 17.—White comb honey, 11½@12½c; light amber, 10@11c; dark, 5@6½c. Extracted, white, 6@6½c; light amber, 5@5¼c; amber, 4@4½c. Beeswax, good to choice, light, 26@27½c; strictly fancy light, 29@30c.

The bulk of California produced honey is sold for Eastern shipment in carload lots from producing points at bottom price. Small lots of choice honey that can be used in local trade bring more. Quotations here given are current prices to producer, f.o.b. shipping point, on Eastern basis for extracted and California basis delivery point subject to agreement for comb.

Wanted Comb and Extracted Honey!
State price, kind and quantity.
R. A. BURNETT & CO., 199 S. Water St., CHICAGO
Please mention Bee Journal when writing.

Wanted—Extracted HONEY
Mail sample, and state style of package and price delivered in Chicago.
John F. Campbell, 53 River St., Chicago, Ill.
34Atf Mention the American Bee Journal.

WANTED!
Honey and Beeswax. Mail sample and state price delivered Cincinnati. C. H. W. WEBER,
2146-2148 Central Ave., CINCINNATI, OHIO.
21Atf Mention the American Bee Journa

BEE-KEEPERS,
Save Money by Buying
Hives, Sections, Brood Frames, Extractors, Smokers, AND EVERYTHING ELSE YOU NEED, OF
THE W. T. FALCONER MFG. CO.,
Jamestown, N. Y.

☞ Our goods are guaranteed of superior quality in every way.
Send for our large illustrated catalog, and copy of
THE AMERICAN BEE-KEEPER,
a monthly for all bee-keepers; 50c a year. (Now in 12th year. H. E. Hill, Editor.)

☞ W. M. Gerrish, E. Nottingham, N. H., carries a full line of our goods at catalog prices. Order of him and save freight.

Please mention Bee Journal when writing.

BINGHAM'S PATENT Smokers
25 years the best.
Send for Circular.
25Atf T. F. BINGHAM, Farwell, Mich.

Tip-Top Glass Honey-Jars

The picture shown herewith represents the best one-pound jar for honey that we know of. It is made of the clearest flint glass, and when filled with honey, and a neat label attached, it makes as handsome a package as can be imagined. Its glass top sets on a flat rubber ring, and is held in place by a flat steel spring across the top as shown in the picture. It is practically air-tight, thus permitting no leak, which is an important thing with honey-sellers.

We can furnish these jars, f.o.b. Chicago, at these prices: One gross, $5.00; two gross, $4.7 a gross; five or more gross $4.50 per gros

If you try them once you will likely use no other kind of top or sealing arrangement for honey ars.

GEORGE W. YORK & CO.
144 & 146 Erie Street, - CHICAGO, ILL.

BEE-SUPPLIES!
ROOT'S GOODS
AT ROOT'S PRICES
Everything used by bee-keepers.
POUDER'S HONEY-JARS. Prompt service. Low Freight Rates.
NEW CATALOG FREE.
WALTER S. POUDER.
512 MASS. AVE. INDIANAPOLIS, IND.

$300,000,000.00 A YEAR
and you may have part of it if you work for us. Uncle Sam's poultry product pays that sum. Send 10c for samples and particulars. We furnish capital to start you in business. Draper Publishing Co., Chicago, Ill.

If you want the Bee-Book
That covers the whole Apicultural Field more completely than any other published, send $1.20 to
Prof. A. J. Cook, Claremont, Cal.,
—FOR HIS—
"Bee-Keeper's Guide."
Liberal Discounts to the Trade.

26th Year Dadant's Foundation 26th Year

We guarantee Satisfaction. What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS. PATENT WEED-PROCESS SHEETING.

Why does it sell so well? Because it has always given better satisfaction than any other. Because in 25 years there have not been any complaints, but thousands of compliments.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

Bee-Keepers' Supplies OF ALL KINDS *****

Very fine pure-bred BARRED PLYMOUTH ROCK Chickens and Eggs for sale at very low prices.

Langstroth on the Honey-Bee—Revised,
The classic in Bee-Culture—Price, $1.20, by mail.

BEESWAX WANTED at all times.

DADANT & SON,
Hamilton, Hancock Co., Ill

Why not get
The "Post" Fountain Pen

The very best in the market; regular price, $3.00, and not obtainable under this price anywhere. The Six Cardinal points Peculiar to the "Post":

Self-Filling, Self-Cleaning, Simplicity, Durability, Reliability, No Leaking.

Given Absolutely Free For two new subscriptions to Gleanings and your own renewal with $3 00; or for one new subscription and your own renewal with $2.50; or your own subscription will be advadced 2 years, and the Pen furnished for $2.50.

In each case all arrears, if any, must be paid in addition, the above offers being for subscriptions fully in advance only. We believe we can say truthfully, without fear of contradiction, that no fountain pen ever put upon the market ever received in so short a time so many unsolicited testimonials from such distinguished men as the POST. The above drawing shows its construction. To fill the POST, all you have to do is to dip the nib into the ink-bottle, draw out the plunger, and the pen is ready for use. Compare this with unscrewing the ordinary style, and refilling with a glass filler that you can not always find when wanted. The self-cleaning feature of the Post, as illustrated, will also commend itself. With most pens specially prepared ink must be used or they are soon of no use, because they become so gummed up and it is well nigh impossible to clean them. With the POST you simply dip the nib in water, draw the plunger back and forth like a syringe or squirt-gun, and in less than five seconds it is clean and free for a perfect flow of any ink that may be handy. We will send, on request, a few of the many testimonials from noted men in various callings who have written merited words of praise for this most valuable invention. We can not offer the pen for sale for less than $3.00; but by special arrangement we are enabled to offer it free as a premium with Gleanings in any of the following combinations: All arrears, if any, must first be paid at $1.00 a year. Then for $3.00 we will send Gleanings for one year, to two new names; for one year to yourself, and send you the pen free. For $2.50 we will send you the pen and Gleanings for one year, and to one new subscriber a year; for $2.50 we will send the pen and Gleanings for two years. If you have ever been disappointed with a fountain pen we assure you that you will not be with this one.

THE A. I. ROOT CO., Medina, Ohio.

☞ GEORGE W. YORK & CO. 144 & 146 Erie Street, CHICAGO ILL., are headquarters for ROOT'S BEE-KEEPERS' SUPPLIES IN CHICAGO. Send to them for their free Catalog.

The Ontario Convention Report.
MORLEY PETTIT.

Getting Ready for Next Season.
G. M. DOOLITTLE.

AMERICAN BEE JOURNAL

43d Year. CHICAGO, ILL., JAN. 15, 1903. No. 3.

WEEKLY

APIARY OF GEORGE BROWN, OF CHICKASAW CO., IOWA.

THE AMERICAN BEE JOURNAL

PUBLISHED WEEKLY BY

GEORGE W. YORK & COMPANY
144 & 146 Erie St., Chicago, Ill.

Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

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SPECIAL CORRESPONDENTS—G. M. Doolittle, Prof. A. J. Cook, C. P. Dadant, R. C. Aikin, F. Greiner, A. Getaz, and others.

IMPORTANT NOTICES.

The Subscription Price of this Journal is $1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

The Wrapper-Label Date of this paper indicates the end of the month to which your subscription is paid. For instance, "dec01" on your label shows that it is paid to the end of December, 1901.

Subscription Receipts.—We do not send a receipt for money sent us to pay subscription, but change the date on your wrapper-label, which shows you that the money has been received and duly credited.

Advertising Rates will be given upon application.

The National Bee-Keepers' Association.

OBJECTS:

To promote and protect the interests of its members.
To prevent the adulteration of honey.
To prosecute dishonest honey-dealers.

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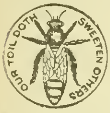
Membership Dues, $1.00 a year.

☞If more convenient, Dues may be sent to the office of the American Bee Journal, when they will be forwarded to Mr. Secor, who will mail individual receipts.

A Celluloid Queen-Button is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-lapel. It often serves to introduce the subject of honey, and frequently leads to a sale.


OUR TOIL DOTH SWEETEN OTHERS

NOTE.—One reader writes: "I have every reason to believe that it would be a very good idea for every bee-keeper to wear one [of the buttons] as it will cause people to ask questions about the busy bee, and many a conversation thus started would wind up with the sale of more or less honey; at any rate it would give the bee-keeper a superior opportunity to enlighten many a person in regard to honey and bees."

The picture shown herewith is a reproduction of a motto queen-button that we are furnishing to bee-keepers. It has a pin on the underside to fasten it.

Price, by mail, 6 cents; two for 10 cents; or 6 for 25 cents. Send all orders to the office of the American Bee Journal.

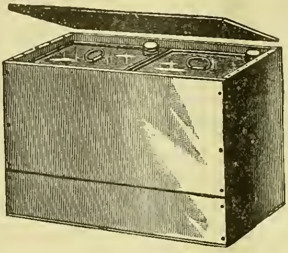
BEST

Extracted Honey For Sale

ALL IN 60-POUND TIN CANS.

Alfalfa Honey

This is the famous White Extracted Honey gathered in the great Alfalfa regions of the Central West. It is a splendid honey, and nearly everybody who cares to eat honey at all can't get enough of the Alfalfa extracted.



Basswood Honey

This is the well-known light-colored honey gathered from the rich, nectar-laden basswood blossoms. It has a stronger flavor than Alfalfa, and is preferred by those who like a distinct flavor in their honey.

Write for Quantity Prices by Freight, if Interested.

A sample of either, by mail, 10 cents, to pay for package and postage.

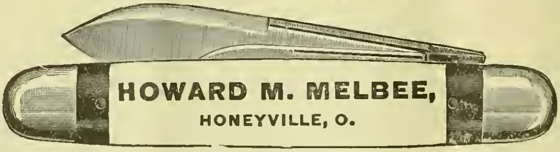
Order the Above Honey and then Sell It.

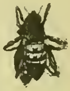
We would suggest that those bee-keepers who did not produce enough honey for their home demand this year, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere.

GEORGE W. YORK & CO., 144 & 146 E. Erie St., Chicago, Ill.

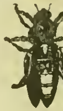
The Novelty Pocket-Knife.

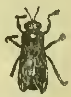
Your Name and Address on one side—Three Bees on the other side.





[THIS CUT IS THE FULL SIZE OF THE KNIFE.]





Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the subscriber, and on the other side pictures of a Queen, Drone, and Worker, as shown here.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a last-time, with proper usage.

Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the "Novelty" is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the "Novelties," your POCKET-KNIFE will serve as an identifier; and in case of death, your relatives will at once be notified of the accident.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid for $1.25, or give it as a Premium to the one sending us THREE NEW SUBSCRIBERS to the Bee Journal (with $3.00.) We will club the Novelty Knife and the Bee Journal for one year, both for $1.90.

GEORGE W. YORK & CO. Chicago, Ill.

☞Please allow about two weeks for your knife order to be filled.

Please Mention the Bee Journal when writing Advertisers *****

ESTABLISHT IN 1861

AMERICAN BEE JOURNAL

THE OLDEST BEE-PAPER IN AMERICA

43d YEAR. CHICAGO, ILL., JAN. 15, 1903. No. 3.

⁂ Editorial Comments. ⁂

The International Exposition of Bee-Culture, to be held at Vienna, in Austria, April 4 to 26, bids fair to be an event of much importance. There will be on exhibition from the different nations colonies of living bees, hives, implements, products of bees, direct and indirect, etc. Interest is added by the fact that the Government Apicultural School, with its large apiary, is located at Vienna. It is the intention to have the groupings such that the status of bee-culture can be studied by countries. Living or preserved specimens of the enemies of bees will be displayed, from the bee-louse to the great bear. Honey-plants in great variety, so far as possible in bloom, will appear. Not the least matter of interest will be the opportunity to meet face to face bee-keepers of all lands.

Exhibitors and others may obtain desired information by addressing Ausstellungs-Komitee, Wien, 1, Schauflergasse 6.

The Knotty Problems of Bee-Keeping.—From an esteemed correspondent comes the following:

"I like the American Bee Journal, and enjoy reading the communications of the various contributors, yet I am somewhat disappointed......Can't you get some of your many bee-men to round up each long-discussed subject, like *shaken swarms*, with a plain, practical digest of the whole matter? and give us little, young fellows some practical facts that we can understand and put in practice?"

Sometimes you may see hanging up in a store a sign with the legend, "If you don't see what you want, ask for it." Same here. The department of "Questions and Answers" is open "at all hours" for those who desire information. In the editorial department will be found from time to time epitomized views upon important subjects, and more or less in the same line from experienced correspondents. Yet with all this there will be times when conflicting views will be expressed, especially upon matters more or less new, and so long as the testimony is not all in it is not an easy thing to give anything like a summarized opinion.

Taking the matter of shaken swarms referred to: A summary would add nothing that has not been given, and no one would be competent to say that such and such testimony is reliable, and such and such is to be disregarded. Indeed, there may be conflict of the most emphatic character between two witnesses without any deviation from the strict line of truth on either side, the difference to be accounted for by difference in conditions or locality. So each one having the whole facts before him must judge for himself what will best fit his own case.

More than one writer has already given in these columns a summary of his procedure in the matter of shaken swarms. What our correspondent probably would like to have would be something like an authoritative statement as to what will be the very best thing *to suit his own case*. It would, indeed, seem a most desirable thing to have implicit instructions given as to all the different things pertaining to bee-keeping. So far as that is possible, it is done by means of text-books and bee-papers; but when all is done that can be done, there will always be still left much for the judgment of the individual bee-keeper. Therein lies the charm, and at the same time the despair, of bee-keeping—the constant solving of problems that arise, only to be followed by others as fast as solutions are found for those already on hand.

It will be, in the future as it has been in the past, the pleasure as well as the duty of this journal to help so far as possible each one, especially the beginner, to solve the difficulties met with, and to this end questions as to those difficulties are always in order.

"If you don't see what you want, ask for it."

Cleaning Smokers.—F. L. Thompson says in the Progressive Bee-Keeper that he burns them out, and also cleans them "by soaking in water for 24 hours or more, when the creosote flakes off easily with the assistance of a knife." Of course, the metal part is separated from the leather and wood before being put to soak. A good kink.

Advertisements of Sugar for Bees, either in the form of sugar or candy, are quite common in English and continental bee-journals, which seems a little strange to American readers. One reason for the difference in this respect between this and other countries lies in the fact that in this country little is thought of the difference in sugars, the general belief being that granulated sugar made from beets is just as good as that made from sugar-cane. On the contrary, in other lands there is held to be an important difference. Especially in England is beet sugar strongly objected to as bee-food, being considered entirely unfit for winter food. So bee-keepers of that country look carefully to the source of their sugar. The latest number of the British Bee Journal to hand contains one advertisement of cane-sugar and five of bee-candy, the price of sugar being much the same as in this country, and the candy from 10 to 18 cents a pound.

Defense of the Kingbird.—The Florida Times-Union claims that the harm done by the kingbird or bee-martin to the bees is largely outweighed by the good it does in driving away hawks. It says:

> When the hawk appears the king calls to his mate and the two rush to the attack with the directness of Schley's ships, and almost with the swiftness of a shell from the Brooklyn. They attack on opposite sides, and each tries to rise above the other—the female distracts the attention of the enemy while eluding blows from beak and talons by sudden turns and quick rushes to get in. But woe to the hawk that delays to strike at her—her mate has rushed above and then down—he clutches the feathers at the base of the skull and strikes straight for the eyes while beating

with his wings to confuse and distract. Then the hawk takes to headlong flight, and will drive through thick trees to free himself, or, blinded by the wings, will sometimes kill himself by striking against an object in the way.

Let the farmer recognize the kingbird as his friend, and give him the toll of a few bees gladly—he has earned them.

Retailing Basswood Honey:—On page 40 is an article by Mr. A. W. Smith, detailing his experience with basswood honey among his private family trade. But we think the explanation is principally located in his statement that about half of his trade prefer *buckwheat* honey. If any one prefers buckwheat honey, in all probability he will never like basswood honey.

But we think the basswood honey Mr. Smith's locality produces must be very different from the fine basswood honey found in Wisconsin and Minnesota. We have quite a quantity of as fine flavored basswood honey in stock now as any one ever need care for.

We have wondered whether Mr. Smith has not had basswood honey that was not well ripened. If so, it is about the worst stuff that can be put on the market. We think we should always prefer buckwheat honey to unripe basswood honey. But if the basswood honey is properly ripened it is indeed a fine honey to eat.

Of course, tastes differ so much. We personally prefer alfalfa honey, and can eat our share af it. But there are other people who prefer white clover honey, basswood honey, sage honey, tupelo honey, or *even buckwheat honey!*

Replacing Queens.—The Australian Bee-Bulletin advises the replacing of queens two years old, and gives the following sad picture of the condition of a colony left to its own devices:

> It does not pay to keep queens two years old, as a rule. They gradually cease to lay, and the colony dwindles. If a daughter supersedes she may be lost in her wedding-flight. As the colony dwindles the nurse-bees decrease to become honey-gatherers. The brood is neglected. Honey may be gathered, but the last honey-gatherer at last dies. The queen may even survive all, or the old queen may die, and a young one come out and not sufficient bees to attend to her, she herself dying for want of food and attention.

Either conditions are different in Australia from what they are here, or else there is a marked difference in bees. Some of our ablest bee-keepers think it the wiser course to leave the matter of superseding entirely to the bees, and they would hardly expect one case in a hundred of entire loss if the bee-keeper never meddled. Before a queen becomes unfit for work—often before the bee-keeper can see the least sign of failing—she is superseded by the bees, the change of queens not affecting the strength of the colony in the least. Is there not some mistake about the nurses neglecting brood to become honey-gatherers? Will not a worker continue the occupation of nursing so long as needed for that purpose, without regard to age? Do workers not continue to be nurses in spring when six months old?

❊ The Weekly Budget. ❊

A SERIES OF BEE-KEEPERS' INSTITUTES will be held in the State of New York as follows:

Canandaigua, March 2 and 3; Romulus, March 4; Auburn, March 5; Cortland, March 6; Fulton, March 7; Syracuse, March 9 and 10; and Amsterdam, March 11. Prof. Frank Benton, Apicultural Investigator, furnished by the United States Department of Agriculture at the expense of the Bureau of Institutes of the State Department of Agriculture, will address the meetings.

The New York State Association of Bee-Keepers' Societies will hold its annual meeting at Syracuse, March 10, at 10 o'clock a.m., in the City Hall. Prof. Benton and other prominent bee-men have informed us of their intention to attend this meeting, and a profitable and interesting session is in store for those who attend. Special rates have been secured for entertainment at the Manhattan Hotel, Fayette St., at $1.25 per day. C. B. HOWARD, *Sec.*

MR. WM. COUSE is also a director of the Canadian Honey Exchange. Through an oversight his name was omitted from the list given on page 3.

"A B C of BEE-CULTURE," edition of 1903, is on our desk. It is a handsome volume in every way, and now contains about 500 large pages. It has just been thoroughly revised and brought down to date in everything that pertains to bee-keeping. More copies of this work on bees have been sold than of any other book devoted to the subject. The price is $1.20, postpaid, or, if taken with a year's subscription to the American Bee Journal, the two will be sent for $1.75. Send all orders to the office of the American Bee Journal

YON YONSON'S quaint sayings are much enjoyed by some, while those who are little familiar with the Swedish dialect have difficulty in understanding them. Some of the words that trouble most frequently are as follows: *Ma* (pronounced may) means with; ay means I; *po* means on or in; *dom* means them, and sometimes they or those.

The question has been asked whether Yon's story about the telephone business has any foundation in fact. All that he has said about it is literally true, and Yon may well be proud of the part that he has had in the matter.

THE AMUSEMENTS OF CHILDREN.—An article on the amusements of children in The Delineator for February contains a wealth of practical suggestions. Most mothers are usually at their wits' ends to provide suitable entertainment for the children. The kindergarten is an aid in the solution of this problem; but it only occupies a portion of the child's time. The work of the kindergarten should be supplemented by play and instruction of a like character in the home. The seed sown in the heart and mind of the child bears abundant fruit in later years, and the good that they derive from song and story and healthful bodily exercise can not be overestimated. A love of Nature, habits of neatness and order, politeness of manner can be instilled in the little one by intelligent effort.

MR. J. ALPAUGH, of Ontario, Canada, writing us Jan. 3, from Florida, says:

EDITOR AMERICAN BEE JOURNAL—

I am on a winter tour through this State, but have just received word that all my bees and bee-appliances that I had up in Bruce County, Canada, were burned up, Dec. 27. I had the bees in the cellar, and all the fixtures in the house above. The loss was about $800. No insurance.

Yours truly, J. ALPAUGH.

We regret very much to learn of the loss reported by Mr. Alpaugh. It is too bad that he had no insurance. We think it behooves every person who has insurable property to be careful to have it insured at all times. The $800 would pay the insurance premium on a large amount for a number of years.

We hope Mr. Alpaugh will be able to stock up again with bees, that he may have a good season this year, and thus recover from his heavy loss.

The Premiums offered this week are well worth working for. Look at them.

Convention Proceedings.

Report of the Ontario Bee-Keepers' Convention, Held at Barre, Ont., Canada, Dec. 16, 17 and 18, 1902.

REPORTED BY MORLEY PETTIT.

The annual convention of the Ontario Bee-Keepers' Association was held in the Court House, in Barre, Ont., Dec. 16, 17 and 18, 1902.

Pres. J. D. Evans called the meeting to order at 2 p.m., and Mr. J. K. Darling offered prayer.

Sec. Wm. Couse read the minutes of the last annual meeting, which were approved.

Pres. J. D. Evans then read his address, as follows:

THE PRESIDENT'S ADDRESS.

I am glad to greet you again, to renew our friendship, and exchange our experiences. While the past year was not a record-breaker in the yield of honey, still the yield was fair, and quality and price good.

One of the lessons we have learned is, there is never a good crop in all parts of Ontario in one year, and any apiarist who has a large crop of honey should make inquiries as to the honey-yield in the whole Province before jumping to the conclusion that it is abundant and going to be cheap; the importance or correct information on this point, and the influence of the Association in keeping up fair prices, was well illustrated in the disaster that befell the attempt of certain commission men in Toronto to break the honey market last fall; and in this connection I wish to say that the thanks of the Association is due Mr. Byer for his prompt and energetic action in the case.

I am much disappointed in the slow increase in our membership. Early in the year the executive prepared a circular showing the usefulness of the Association to bee-keepers, and had it mailed, at considerable expense, to about 7000 bee-keepers in Ontario. I regret to say that the increase in membership did not justify the expense. It seems amazing to me that any bee-keeper should be so blind to his own interests as to stand aloof from so useful a society. I was surprised at receiving only six applications for the services of the inspector of apiaries during the year, and wrote Mr. McEvoy asking him to let me know what applications he had received, and what apiaries he had visited. The inspector refused to give me this information, and quoted some old resolution passed in the time of the late Mr. Pringle, forbidding him to give any information of this kind except to the Minister of Agriculture.

If any such resolution is on the books of the Association it is of no force whatever, as by the statutes of Ontario the inspector has no authority to visit an apiary unless when sent by the president of the society. See Sec. 3, Ch. 283, S. A. 1897.

Section 6 of the same Act provides a fine of not less than $20, or more than $50, or imprisonment for two or three months, for any owner who conceals the fact that foul brood exists among his bees.

Section 10 of the same Act reads: "Every bee-keeper or other person who is aware of the existence of foul brood, either in his own apiary or elsewhere, shall immediately notify the president of the Ontario Bee-Keepers' Association of the existence of such disease, and in default of so doing shall, on summary consideration before a Justice of the Peace, be liable to a fine of $5 and costs."

Section 12 of said Act orders the Association to report to the Minister of Agriculture each year, the number of colonies destroyed, and the locality where found, so that the secrecy sought to be observed is contrary to law, and absurd.

I think the Association should seek for the authority to appoint a spb-inspector in each of its districts, and thus save unnecessary travelling expenses; and that in the future our presidents should strictly enforce the law, that no inspector or sub-inspector inspect any apiary unless directed by the president for the time being. It would be well to have a by-law passed defining the duties of the inspectors, and the Act for the suppression of foul brood among bees, printed in the minutes of this session.

I greatly regret that through some misunderstanding Prof. Harrison was not in a position to carry out his experiments in curing foul brood with formalin. He wrote the secretary early this season asking for samples of foul and black brood, and asked that Mr. Gemmill supply them. Unfortunately, through the delay in the correspondence, and the fact that the sub-inspector (Gemmill) was busy, samples were not sent until it was too late, and we will have no report this session from the Professor. I hope he will be supplied with all necessary materials for his experiments next season, for they are of the utmost importance.

I hope that we may have a pleasant and profitable meeting. J. D. Evans.

Wm. McEvoy thought people whose bees have foul brood should do as they do in Wisconsin—report directly to the inspector. The president changes every year, and has not the oportunity of understanding the situation as the inspector can.

R. F. Holtermann—We must act in a legal way. If the Act is wrong, have it amended; but in the meantime the inspector should comply with the Act; then he has the Act to back him.

Mr. Gemmill—The Foul Brood Act of Ontario was the first law of its kind in America. We can not expect it to be perfect; but if we do not like it let us appoint a committee to have it amended.

On motion, a committee composed of the following was appointed to amend the Foul Brood Act: Messrs. Darling, Sibbald, Gemmill, Byer, and Newton.

FEEDING FERMENTED HONEY.

"Can slightly fermented honey be safely used for spring feeding?"

W. A. Chrysler—Yes. I prefer to heat it and evaporate to the consistency of ripe honey, then add water to make it thin enough for feeding.

J. K. Darling indorsed this.

KNOWING FOUL BROOD AND CURING IT.

"How do you know foul brood, and how is it cured?"

Mr. McEvoy explained the symptoms and gave his valuable cure. To dispose of the brood leave about a quart of bees, and pile up two stories high for 10 or 12 days till most of the brood hatches. Treat this colony for foul brood in the usual way, and give them a queen. All operations should be done in the evening, and during a good honey-flow. If the flow should stop suddenly you must feed. You can't cure foul brood in fruit-bloom—the flow is too risky. If it should stop you might have starved brood. Wait till June. Mr. McEvoy has not much faith in forced swarms curing this disease, as one shaking does not rid the bees of the diseased honey in their sacks.

WEED-PROCESS COMB FOUNDATION.

"What is your experience with Weed-process foundation?"

Mr. Chrysler—I have not used it.

W. J. Brown—It is no advantage.

Jas. Armstrong—For the brood-chamber I would not use anything else. There are more sheets of the foundation per pound, and it is stronger.

Mr. Holtermann—The objection raised to section foundation is that the bees do not work on it so readily. Pressure in milling it makes it harder.

C. W. Post—It is good when properly manipulated.

W. J. Craig—The hardness depends on the wax used. Wax from cappings is much harder than that from old combs.

Several members said they found the bees prefer old-process foundation. Some maintain the contrary.

FULL SHEETS OF FOUNDATION AND FORCED SWARMS.

"Is it advisable to use full sheets of foundation in making forced swarms?"

Mr. Chrysler—If you do, put an empty hive-body under for a few days.

Mr. Post—For extracted honey use foundation. For comb honey use starters. Five or six starters give worker-comb; more than that give drone-comb.

FORCED SWARMS.

"Is forced swarming a success?"

Mr. Chrysler—Yes, if you do not shake prematurely. Wait for some sign of swarming.

F. A. Gemmill—This matter has been well discussed in recent bee-papers. Forced swarms should be made when there is honey coming in. The bees should be allowed to fill themselves before shaking. These swarms should be as much like the natural as possible.

Mr. Evans—I prefer shaking on full sheets rather than on starters.

Mr. Holtermann—I have been practicing this more or less for ten years. A colony should not be "swarmed" until cells are started. When one is found in this condition smoke and jar to cause the bees to fill themselves, then go on to the next hive. Continue until No. 1 has had plenty of time, then shake. Do not shake off all the bees.

GETTING RID OF ANNOYING ROBBER-BEES.

"How would you get rid of robber-bees following around the yard and bothering while you are working?"

Mr. Chrysler—Find out which colony is doing it, and shake them off on starters. This gets them roused up and filled with honey. Give them sections, and they go to work.

Mr. Holtermann—I do not see how robber-bees can be gotten rid of in the way mentioned. On every hive we have a portico with grooves in the front into which we can slip a screen and confine the bees to that portico. When any work has to be done at a time when no honey is coming in, and robbers are about, put on these screens early in the morning. Every colony in the yard is thus confined to the hive in a way that does not worry them, for they can fly about in the portico. No robber-bees can leave home to disturb at any other hive, and you can clip queens, extract buckwheat honey, or do any other necessary work, without the annoyance or danger of robber-bees.

Mr. Post advocated setting out a few smeared combs for the bees to clean up. After that they will be quiet for the rest of the day.

THE NATIONAL BEE-KEEPERS' ASSOCIATION.

"Is it advisable for this Association to adopt similar work to that of the National Bee-Keepers' Association?"

Mr. Gemmill—As members of the National Bee-Keepers' Association we have its full protection, and nothing further is needed.

Mr. McEvoy read an invitation from N. E. France, asking the Ontario Bee-Keepers' Association to join the National in a body.

Mr. Craig—The National has refused assistance in the case of Brock vs. Patterson, although Mr. Patterson is a member.

Mr. Holmes—They refused on the ground that Mr. Patterson's lawyer was not in their employ.

WINTER TEMPERATURE FOR BEES.

"Would you expect bees to winter well where the temperature remains constantly at 41 degrees, Fahr.?"

Morley Pettit—I would consider it a perfect cellar if the temperature never varied from 41 degrees, Fahr., provided a chaff cushion or some such top packing is on each hive.

Mr. Byer—My cellar has that temperature, but I feared it was too low.

Mr. Holmes recommends 40 to 42 degrees as the right temperature.

Mr. J. L. Byer then read his paper on

MARKET REPORTS.

For different reasons it was with much reluctance I consented to write a short paper on this phase of our business. My chief objection was my lack of experience as compared with a number of my hearers to day, coupled with the fact of certain peculiar and somewhat unpleasant conditions existing the past season; the same, no doubt, that prompted our executive committee to bring this subject before you at this our annual meeting.

From the first it has seemed to me that the term "market reports" was hardly comprehensive enough. "Crop reports," to my mind, is a little more expressive. With this thought in view, I have taken the liberty to use the two phrases, not exactly as synonymous terms, yet in conjunction the one with the other. For the sake of convenience I have divided the subject-matter under two headings —"Market or Crop Reports," as published in the regular market columns of our bee-papers and other papers, and "Market or Crop Reports" appearing from time to time in the news columns of our dailies and other periodicals.

With the first-named part of the subject I believe there are few of our bee-keepers who have much to complain of. As far as I have been able to ascertain, the bee-papers giving us reports of crops and prices of honey, are reasonably correct, and are endeavoring, to the best of their ability, to give the bee-keepers all the information they are able to do under conditions as they exist to-day. As to our daily and weekly papers, I have never noticed that the general public, or merchants either, for that matter, take much notice of honey quotations in the regular market columns. Sometimes I have received more for my honey than the market quoted, and at other times less. From the "Honey Column" in Gleanings for Sept. 15, I copy the following extract of report forwarded to said paper, under date of Sept. '02, by a Toronto firm that handles considerable honey each year: "Extracted honey, white clover, good body, 8c per lb." Some was bought at 9c, even at 10c, but the crop turned out better than was expected, and bee-keepers are willing to take less. It seems a mistake that bee-keepers are all crowding their product on the market at the same time, and what they can not sell they consign to commission houses that always break the price. The facts, as outlined in this report, are so simple as to need no comment from me.

While not aware that any considerable quantity of honey was placed in the hands of commission men so early as Sept. 10, I am, however, quite alive to the fact that it is quite natural for the bee-keepers (especially men of slim pocket-books) to exchange their honey for money just as soon as they can get what they consider a fair remuneration for their product. Let me add that as long as the marketing of the honey crop is conducted in the haphazard manner of to-day, any amount of preaching to the contrary will not prevent the bee-keeper of limited circumstances from converting his honey into hard cash at his earliest opportunity. These remarks might perhaps be applied to the small producers as well, a class, by the way, that has been censured so much in the past that we can well afford to leave them alone in the discussion to-day.

The second division of our subject is, no doubt, by far the most important one for us to take into consideration—perhaps the only part of the question that we are much interested in. For some inexplicable reason anything appearing in the news columns of our papers is at once swallowed as gospel truth by the majority of their readers. This fact has often been the means of prompting people to circulate false items and reports for the sake of the "sensational," for notoriety, individual gain, and other selfish reasons. It may be that some who took the baits held out in our papers the past season, and who are yet smarting from the effects of the baits, will be hoping that a tirade of abuse will be showered on the heads of those "awful fellows"—the wholesale men. While not in sympathy with methods of business as practiced by certain firms, yet I realize, as every fair-minded man must, that this question, like all others, has two sides to it. So, instead of denouncing the "other fellow," my purpose to-day will be rather more to see if we as bee-keepers are not sometimes, to a certain extent, indirectly responsible for reports being circulated adverse to our interests. "Charity begins at home," likewise some other virtues, so I will give an instance in my own experience the past season, which taught me a little lesson.

During the busiest part of the season the editor of one of our local papers paid us a visit in the apiary one afternoon. Being very busy, I forgot to "put a flea in his ear" before he left us, as to any report of his visit he might write up in his paper. The following week I was surprised to find in a quite racy account of his visit with us the statement that we would have *so many tons* of honey this year. While the item was not so much of an exaggeration, yet I felt sure that it would have a bad effect, for, to the average reader, a ton of honey seems like something prodigious. Although I at once interviewed the editor of our other local paper, and asked him not to copy the item in question, this did not prevent local editors in adjoining towns from copying the same. Now, as to results: In a short time letters came to me asking for quotations on honey, coupled with statements like these, "Honey must be a great crop this year;" "As you have so much it must be very cheap," etc.

A much more forcible illustration in this line was the notorious statement, published in one of the Toronto dailies, purporting that honey was a great crop in all sections of Ontario, consequently it would be cheaper than for some years; also stating that a certain wholesale firm had had the refusal of a large quantity of extracted honey. To make matters worse, the Associated Press copied the article, which was scattered broadcast over the land, and somehow the authority of the Department of Agriculture became attached to the same. It is only fair to say that the firm in question, after some time, repudiated the statements credited to them. However, that did not prevent a number of bee-keepers from stampeding in the meantime, and selling their honey at a very low figure.

Now, as to the bee-keepers part in causing reports like this to be sent out, while, as before intimated, not endorsing methods employed by certain firms to find out what the crop of honey, yet the fact remains, that if they are going to do business in a business manner, they must in some way at least have an idea as to the amount of honey in sight. As long as we as bee-keepers do not provide them with better plans for gaining information of the honey crop, we should not be too emphatic in saying just what they should do, or just what they shall not do. I venture to say that if we could have the privilege of perusing *some* of the letters sent to the wholesale firms by bee-keepers, in answer to the query as to their crop of honey, we would be greatly surprised at the glowing accounts of big yields, etc. We would not wonder that wholesale men sometimes jump at conclusions.

Some time in September of this year, speaking with different wholesale men in Toronto, I was surprised to hear them speak of bee-keepers coming to them and telling of their big crops of honey. One man in particular, who had a fair crop of honey this year, seemed to have visited nearly every firm for the purpose of expanding himself. I did not wonder that when I tried to assure them that there was not a large crop of honey in Ontario this year, they shook their heads in a knowing way, intimating that I had "an ax to grind;" or I would not talk like that.

In conclusion, while having treated this subject only in a superficial way, yet I frankly admit that as conditions are to-day I have no suggestions to offer, other than the very simple ones that will readily occur to the mind of every one without me taking the time to mention them. The only logical solution of the problem of reporting and marketing the honey crop is, that we want to change existing conditions. While prices for honey, as for nearly all other products, must always be largely controlled by the laws of supply and demand, yet this is the case to a greater extent with some things more than others. For instance, many varieties of fruit are of a very perishable nature, and in the event of a large crop there is not time for proper distribution. On the contrary, *good honey* will keep indefinitely, and even if we have a fair crop no glutting of the markets need take place if it be properly distributed. As it is to-day, a fair crop in one locality will often overload the nearest market, even should there be a comparative failure of the crop in other sections. This will at once bring to our minds the paramount issue before the bee-keepers of to-day—commercial organization. In this age, when the combination spirit is so rampant in the land, that some one has suggested that "ten mills make one trust, ten trusts make one combine," should be added to our tables of weights and measures, I feel that we should be very careful how we move in this direction. I have nothing to offer along this line, indeed, it would be presumption on my part to do so, as we are shortly to listen to a report from a committee appointed to look into this matter. Nevertheless, I feel sure that anything that will better the conditions of the bee-keepers, and at the same time not violate the principles of the Golden Rule, will receive the hearty support of the majority of the members of the Association.

J. L. Byer.

Mr. Craig—This subject was under discussion in the Canadian Bee Journal last season, but no definite conclusion was reached. Mr. Byer's paper has left the matter as we all see it. So far as the journals go, they receive their information from the very best sources. The directors have faithfully given reports, and every member of this Association, and every reader of the Canadian Bee Journal, from the Atlantic to the Pacific, have been kept posted with reference to the condition of the honey crop. The trouble lies with bee-keepers who think to save money by staying out of the Association and not taking the Journal. We have suffered from press reports; we can't control these. The report sent out by the Associated Press last season came from the hands of manipulators. Postal cards were received by the leading bee-men of Ontario, asking the amount of honey they had. Some were foolish enough to reply to these. They had no business to reply. If the house which sent them out wanted honey, and asked for quotations, well and good; but by telling them our business we leave ourselves at the mercy of these men. I can't offer any remedy except a honey exchange.

Mr. Sibbald said that he was a bee-keeper in summer, and wholesaler in winter, so he had a chance to see both sides. He pointed out that a dealer would not buy unless he had an idea of the Province. It is important that some one be ready to buy our honey, and to sell it we must give the dealer some idea of the crop, so he can buy in a way to make a profit. But bee-keepers *do* give some funny reports. For instance, one man writes in that he has 250 pounds per colony, and you afterwards find out he has two colonies. Another reports 15,000 pounds of honey, but it turns out that he has 300 colonies. If we had a honey exchange we could get a fair price all around, and dealers would rather deal with a corporation. The market situation here is about like this: For two years the crop was practically a failure. Some who had crops, sold at a fair figure, and the dealers made well on it. This made the dealers keen, and when better years came the bee-men made well, but dealers loaded up too heavily. Next year they are going to be wary; there are more bees in the Province than ever before, and if a good crop comes, look out for a big drop in the price.

Mr. Couse—Buyers have a right to learn the supply. Sellers want to learn the price. Our honey has to compete with South American honey, Cuban honey, etc., which are shipped to Toronto for manufacturing purposes, and buyers need to be cautious.

Mr. Dickenson—In the British market our honey does not compete with these southern honeys. They are for manufacturing purposes. Ours is solely a table honey. In Liverpool our honey commands twice the price that Jamaica honey does.

Messrs. Couse, Holtermann, Heise, Byer, Sibbald, and others, pointed out that in Toronto our honey is in direct competition with southern honeys. Large quantities are used in manufacturing, and although superior as a table honey it is no better for manufacturing than the others. It is manifest then that so long as Canadian honey is crowded into Toronto its price can not rise above that of the inferior southern kinds.

Mr. Dickenson insisted that we should ship to England, where it is appreciated for table use.

Mr. Evans—Manitoba and the Northwest is a good place to ship. Send it candied in 10-pound pails. These pails are very useful out there. But to save freight it is almost necessary to ship in car-lots.

Mr. Chrysler—Our extracted honey is not all good table honey. It should be graded, and let No. 2 honey compete with outsiders; No. 1 will bring a good price.

Mr. Holmes—What is the opinion of the convention with reference to telling wholesalers how many pounds of honey you have? How would their question compare with my asking how much money they have?

Mr. Evans—Don't report a big crop enthusiastically, nor conceal the fact of a failure.

Mr. Holtermann—The report of the best bee-men is not a fair representation. Let the report be fair, and not inflated.

Mr. Chrysler—Give the yield per colony, and compare with last year's yield.

(Continued next week.)

Contributed Articles.

Getting Ready for the Next Season.

BY G. M. DOOLITTLE.

By the time this reaches the readers of the American Bee Journal, their bees will all be in winter quarters, and they doubtless, as many another has done, well be asking themselves what next they can do to be best preparing for another season. All who are truly bee-keepers will not think of idling winter away, waiting for spring to come to see what will turn up with the bees and their business, but will be looking around immediately to see if it is possible to be in better readiness than they were the year before, and especially how they may be gaining more knowledge regarding their pursuit.

I do not think there will be a dissenting voice when I say that the all-important point is a thorough knowledge of apiculture. And if this is so, there is no better time to gain that knowledge than the long winter evenings which are now before us. Get around the back volumes of the American Bee Journal, and other bee papers and books, if you have them, and read them carefully and thoroughly, so as to put what you learn in practice the next season, and thus you will have just what you wish at your "fingers' end" in the busy part of the season, when you would not have time to ask questions or visit some bee-keeper to find out just what you might wish to know. In this way anyone can always be advancing, instead of retrograding.

Don't be found around the country store or saloon on winter evenings, sitting on dry-goods boxes and barrels, filling the minds of others, or allowing your mind to be filled with idle gossip, and often worse than idle gossip; or spend your time over an old, dingy checker-board, or musty pack of cards, or the billiard table. These things are not in place for an energetic, wide-awake bee-keeper, with plenty of unread bee-literature at hand. "Read, study, think," should be our motto always, and especially at this season of the year. And we will find only fun in these things, if we are interested enough in our business to make a success of it.

Then, during the daytime, we can be getting everything ready that we wish to use during the next season, so it can be put right where we want it at a moment's notice. The first to get ready should be our supers or surplus arrangements, so that we can set the whole on in one day, if necessary, just when the honey-flow begins. Get these around, and scrape off all the propolis adhering to them and the separators, and all bits of comb, should there be any fastened to any part of them. All bits of comb should be saved, and to save them best the wax-extractor should be close at hand, and all waste pieces of comb put into it during the whole season. As often as it is full, get out the wax and have it ready to fill again.

All sections that are partly filled with honey should have the honey extracted from them, unless you will need it to feed in the spring, as this honey will not be likely to correspond in color or quality with that which the bees will put in to finish out the sections the next season. To extract this nicely, fix a shelf close to the ceiling of your room, put the honey thereon and keep the room so warm that the mercury will stand at from 90 degrees to 100 degrees for four or five hours before you commence to take the honey out. By placing the honey near the ceiling we do not need nearly so much fire to heat it as would be required if placed on floor or bench. These partly filled sections, if we tried to extract them without warming, would be all ruined, so far as the combs are concerned, and the apiarist's prospect of a good yield of honey the coming season would be quite badly damaged also; for, according to my value, these are better than money in the bank, and will give a greater interest.

After the honey is extracted, these sections are to be put in the center of each super, as "bait-sections," thus securing an early commencement of work by the bees in the supers, and also so the full sections shall come off at once, which, as a rule, makes the bees loth to enter a second lot. I usually put in from two to eight of these baits, according to the number I have in proportion to the colonies I expect to run for comb honey the next season, when the rest of each super is filled out with empty sections, each having a starter of *thin* foundation in it, or fill the sections with full sheets of foundation, as you prefer. Having the sections all nice and each super filled and all complete, pack all nicely away where they will be kept clean and free from dust till wanted for use.

The next work is to secure the material for further sections, by buying or otherwise, and make it up. To arrive at the number I wish, I allow 150 one-pound sections for each old colony I expect to work for comb honey during the next season, and after 30 years of experience I find this estimate is not far out of the way. Of course, there are many seasons in which I do not use them all, but when we have a season like that of 1901 in this locality, with an average of 180 one-pound sections all complete, we are pleased to have 150 of them all prepared at the beginning of the season. It is well always to be sure to have nearly enough, for it is far better to have some left over unused, than to find ourselves with not half enough when the honey season is in full blast.

Many put off this getting-ready part till spring, so that they may know how their bees winter, but the one who expects to make a successful bee-keeper will not do this; for if the getting-ready part is put off till just before the honey harvest, the result always shows a greater or less loss.

Having the section part all in readiness, we next come to our hives, frames, covers, bottom-boards, etc., all of which should be looked over, repaired or built new, just in accord with the number of colonies we expect to increase to the next season. Then having these all in readiness, we next wire the frames we expect to use brood foundation in, and put the foundation in also, so that this part will be in readiness. Many put off this part, thinking that the bees will not work this "old foundation" after it has been in the frames for some months, but, rest assured, that the bees will work this foundation just as well when wanted, as they would had it been put in the frames an hour before placing them in the hive. After having the frames thus prepared, place the number you wish to use in each hive, and pack all nicely away.

We are now done, all but the material for any experiments which we may have planned to make, and we can get this out to suit our fancy, and have all in readiness, by which time probably spring will be upon us, and the bees call us to the active duties of the season of 1903.

Now, after any have done as above, who have not been in the habit of doing so before, they will find that they have enjoyed the winter better than ever before, while at the same time they have advanced more in the pursuit of bee-keeping than they ever did in any two years before. If they do not so find, then their experience will be entirely contrary to that of many of our most practical apiarists.

Onondaga Co., N. Y.

Selling Basswood Honey to Consumers.

BY A. W. SMITH.

MY object in writing this article is to give my experience, and try to find out if it is the same as the experience of bee-keepers in other parts of the country.

The bee books and papers say, "Develop the home market," and I have followed that advice so that from a market of a few hundred pounds, 20 years ago, I now have a market for from 6,000 to 8,000 pounds per year, and nearly all of it is sold direct to consumers, or to retailers who sell it to consumers, and it will probably average about ⅛ comb and ⅞ extracted each year.

I can sell raspberry, clover, buckwheat or goldenrod honey, or a mixture of either two or all of them, and my customers will be well satisfied; but when it comes to the basswood honey they will not take it at all, if they can get any other; and a mixture of even ten percent basswood honey with any other kind I get will spoil the flavor of the whole lot. If they have to take basswood honey because I have no other kind for them, they are sure to tell me, when they buy honey of me the next year, that they do not want any more basswood, and they frequently tell me that they gave away what they had, or else say they have most of it on hand, because they did not like it.

Basswood honey is the whitest honey I get, and looks very nice, and would sell well if it even had a fair flavor, but its nice looks are a damage to the honey market, for persons who are not in the habit of buying much honey will buy some of that once, because it looks so nice, and, by the time they have eaten that, they have concluded that their folks "don't like honey, anyhow;" and the chances are ten to one that they will not buy honey again even when they can get the choicest clover or buckwheat.

A large number (perhaps 40 percent) of my customers prefer the buckwheat honey, but if they cannot get that they will take any other kind I happen to have—except the basswood—and be ready to buy again next year.

If a bee-keeper desires to develop a good home market with basswood honey he must have a different quality of basswood honey from that which the bees get in this part of New York State, or else have a different lot of customers than those who buy honey of me year after year.

Perhaps some may think I am too much prejudiced against basswood honey, but I have simply given the facts as I have found them while developing my home market.

Sullivan Co., N. Y.

[See editorial comments on page 36.—EDITOR.]

More on the Queen-Rearing Question.

BY DR. E. GALLUP.

IT seems that Mr. Alley is getting hot under the collar. He saw his first queen in 1859, while I saw mine in 1835—24 years before.

I received two queens from him which he says were perfect in every way, yet in another place he says that they were reared by a method he now condemns. First, they were small and inferior in size, but the two Mr. Doolittle sent were at least one-third larger than Mr. Alley's, and the shape of the Doolittle queens was much more nearly perfect than Alley's. The shape of the queens has a great deal to do with my judgment in deciding their good or bad qualities. See my article in a previous number on "The Shape of Queens."

Mr. Alley says, "I do believe that fully 90 percent of *all* the queens reared are as worthless as so many house-flies."

Now, I am so foolish as to think that is a more sweeping condemnation of all queen-breeders, himself included, than I ever thought of making. No one can place a finger on any article written by me where I have condemned queen-breeders promiscuosly. I have only been telling how many of the queens received have turned out, and explaining so that the evil can be remedied.

See page 506 (1902), an article by W. H. Laws, a queen-breeder of experience; and page 596, under the head of "Strong Colonies for Queen-Rearing." See also page 652, a proposition to Mr. Alley by Edward Scroggin. Why not take up with that proposition, Mr. Alley? Are you afraid that but 10 percent of your queens would be good? See page 603 on "Rearing Queens," by R. J. Cary; and also page 493, under the head of "Hand-Shake for Dr. Gallup."

When I said that Messrs. Alley and Doolittle complied with the requirements, etc., I have to acknowledge that I was mistaken. I supposed that Mr. Alley, having had large experience, must know that a pint of bees could not keep up the necessary warmth and amount of food for a perfect queen.

As to his statement that good queens could not be reared in a colony with a laying queen, how was it queens reared before Mr. Alley was born managed to survive? Do, or did, all bees have their queens taken away before starting queen-cells? So far as my experience goes, with one exception where queens were reared by natural swarming, the first cells are sealed before the queen leaves the hive. In natural superseding the egg is laid in the cell, and the queen, when hatched, lives in the same hive with the old one until she dies. We get the best of queens in that way. I have had two instances where both have lived through the winter together.

There is an item in the Pacific Bee Journal, credited to a German journal—Deutsche Bienenzucht—which says that queens reared in natural-swarming time are *always* larger and of greater longevity than queens reared from worker-larvæ. Now, whose theory does that correspond with, Mr. Alley's, or mine? German writers are quoted as being well-informed.

Mr. Alley says the talk about the umbilical cord—"missing link"—is nonsensical, out of place, etc. Well, it must be, if his statements are true, that queens reared in small nuclei containing a pint of bees are equal to any queens ever reared. He affirms; I deny that statement, *positively*. Now, Mr. Alley, it is just as far from my house to yours as it is from your house to mine. Why was, or is, that "missing link" attached to some embryos and not to all? If I examine any number of queen-embryos during swarming or superseding time, and all have that attachment, it must have been placed there for some purpose. Then, if we examine hundreds of cells built in nuclei, or in any ordinary colony that we compel to rear a queen by taking away the old one, and *cannot* find a single embryo with that, something is lacking; Nature makes no mistakes.

I have said heretofore that the embryo, after being sealed up, draws sustenance or nourishment through that tubular cord. This nourishment adds both size and longevity to the queen. Now, the reader will, I hope, understand that in no case in all my observations on bees have I made my conclusions from one sample or specimen, as Mr. Alley accuses me of doing.

In the days of 1859 to 1860, Mr. Alley says there was no "missing link." I venture the assertion that it was always there, with properly-reared queens. I discovered my first one just 43 years ago, and have been looking in vain for one on all nuclei-reared queens every since. But in order to bolster a false theory, he thinks it necessary to deny facts. Falsehood and misrepresentation cannot disprove facts. I wonder how, in the name of common-sense, he could, after dissecting a cell to see whether there was an umbilical cord, have the queen hatched, and assert that she was either perfect or worthless? He is either compelled to ignore the umbilical cord, or abandon the statement that queens are as good reared in nuclei as those reared naturally in strong, populous colonies.

It would be a peculiar coincidence if in rearing queens—10 percent only being good, as he asserts—he did not have two good colonies in his apiary. I said, years ago in the American Bee Journal that all the colonies of an apiary could be bred up to the same approximate standard of excellence. Why does not Mr. Alley do so? Is it to be wondered at that his patrons do some tall kicking, as he says in his article? It would look to a man up a tree like a sort of lottery business if only 10 percent of the 50,000 queens that he boasts of were good. Mr. S. Q. Conkle, a neighboring bee-keeper, says he received two queens from Mr. Alley of the 90-percent or "fly" class. I have heard of other parties complaining of the same trouble. If he did not have complaints it certainly is to be wondered at, so long as he advocates rearing queens in small hives with but a pint of bees.

I suppose that it is a great comfort to Mr. Alley to build a man of straw and call him "Gallup," so as to show the reader how easily he can knock him down; or to dress Gallup up in bear-skins and try to set the dogs on him. Now, if Mr. Alley does not know that falsehood and misrepresentation is not argument, I do.

I am sorry that I brought Mr. Doolittle into this controversy, but I hope he will survive. Mr. Sutton, a near neighbor, says he had a splendid queen from Mr. Doolittle, and different parties say that they have received splendid queens from him. See my article in a late number on exchanging queens with Dr. Hamlin, and the results, reason why, etc.

Did you know, Mr. Alley, that the one that kicks hardest demonstrates that he is the most guilty? Only think, 90 percent of 50,000 worth as much as so many flies! No wonder you kick. If I were as guilty as that perhaps I might squirm a little myself, who knows?

Orange Co., Calif.

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

Honey for a Bad Cough.

The following is from the "Health and Beauty" department of the Chicago Daily News:

"Equal parts of honey, olive-oil and pure home-made wine made from grape-juice or currants, is both soothing and strengthening for a bad cough."

Cleaning Out Unfinished Sections.

On page 781 (1902) Mr. Bevins gives his plan for cleaning out unfinished sections, and says I may find all the fault I please with it. Now, I am not going to find one word of fault with your plan, Mr. Bevins. It is an ideal plan if you can get your bees to empty out the honey and carry it down. The trouble with the plan with us was that we could not get the bees to do it with any degree of certainty. Occasionally they would do all right, but only occasionally, even with an empty hive-body put on and the sections placed above that, they seemed to think it was all right to let it remain where it was.

I am sure we tried your plan most thoroughly before we gave it up. We wanted a plan we could feel sure that every drop of honey would be emptied out. With the robbing plan you can feel perfectly sure that all will be emptied. With us the other plan was too uncertain.

I wonder why your bees will carry the honey down, and ours are so stubborn about it, for, as you say, it is an advantage to feed where it is needed. I would go farther with your criticism than you did, for I believe the colonies that have plenty of stores get the most of the honey, as they are usually the strongest. As far as feeding colonies is concerned, it is not a very satisfactory way to do, but for getting the sections emptied it is a success.

We would much prefer to use your plan if we could only succeed in getting it to work. So far as I can see, we did exactly as you did, and we even put on the empty hive-body between, but they refused to take it down, and they needed the stores, too. Is there some kink about it, or is this to be laid to locality, too?

I am very glad to know, however, that some one else has had trouble along the same line. Does that sound selfish? Well, you know "misery loves company," and I confess I felt better when I read, on page 811, this from the pen of such able authority as Mr. Hasty:

"A beginner will say to me: 'Why not leave the sections on the needy colony when you have got them there once?' To make bees clean up combs placed over them and carry down the honey, is one of the provoking things of apiculture—more frequently failure than success."

A Temporary Bee-Shed.

Perhaps our bee-keeping sisters would like to know how one of their number built a shelter for her bees. Well, here is the story of that structure, which, by the way, was more useful than beautiful:

Imitating the example of Gail Hamilton, I went out one morning to build—not a barn—but a bee-shed. Like her, I did not know exactly how to build my proposed edifice, but, in her words, I could "keep up a mighty clatter till some one should come that did know," which amounts to the same thing.

In my case the carpenter had disappointed me about coming to make the shed, and while waiting for him the weather had suddenly turned cold. November winds were howling, and, in this extremity, I went out to erect a temporary covering for my bees wherewith to bridge over the time till the carpenter should appear. Briefly, my architecture was as follows:

I put a barrel at each corner of the hive, and as the hive rests upon a bench, I was obliged, in order to make the roof high enough, to lay thick boards from barrel to barrel across the tops. Over all of this was placed a disused door as a roof, while against the open spaces at the sides and back, were leaned pieces of boards. And now, behold with your mind's eye, the completed structure!

To use the words of Ovid, I did not know whether "the workmanship surpassed the matertial," or, reversing the sentence, whether the material surpassed the workmanship. Doubtless the building would have disgusted a bee on account of not being hexagon in shape, but so far as my own opinion was concerned, the barrels—or columns—even if not of the Doric order, seemed to possess a proudly swelling air, as if to assure me that I would be justified in hanging out my shingle as a carpenter.

However, the shed served its purpose, although its mission was short, for in a few days the weather moderated, and with the first warm rays of the sun came a man laden with nails, hammer, and saw. Soon a bee-shed was made, and soon the hive itself was prepared for winter.

Now I can gaze upon the whole affair with satisfaction, hoping that my bees will go safely through the winter, and that when spring comes again the queen will be able to open parliament under the most happy auspices. Vive la mere abeille! KATE V. AUSTIN.

Wayne Co., Ind., Dec. 10.

Talk about women not being able to drive a nail! Well, here is a woman that can build a whole building without driving a single nail. How's that?

❋ The Afterthought. ❋

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, O.

OLD BLACK COMBS AND QUEEN-REARING.

I guess A. C. F. Bartz is right, that old black combs when cut are not built out again with nearly the readiness which the new comb would be. But they build queen-cells on the cut edge just as readily, or at least readily enough for use. Page 761.

LATE STRAWBERRIES—BEANS, ETC.

Two quarts of fall strawberries for northern Illinois is not only doing pretty well, but it is also one more of the numerous evidences that the earth's weather has been unhinged somewhat for a year or more. I'm fond of lima beans, and take much pains to have plenty. Last year, although the plants grew luxuriantly, there was not a single pod on a great part of them. And some that had pods had no beans in the pods. This year limas bore the most beans I ever knew them to. Sweet potatoes were just the opposite—best I ever had last year, best in yield, and biggest potatoes. This year there was not one that could be fairly called big enough to eat on a patch that looked finely as to outward appearance—myriads of long, slender roots that never fatted up. When the *fruit* of plants is so variable we need not be surprised that the nectar-flow varies. Page 763.

SHOCKED SWARMS.

And now, on account of the shock of the shake when the shaking is shocking, Shaker wants 'em called "shocked swarms." A suggestion altogether shocking. I suppose if you then put a shock of corn-fodder around them for winter protection they'll be double-shockers. Page 765.

LIGHT IN THE BEE-CELLAR.

Yes, why not take a little pains to have the bee-cellar so it can enjoy health-giving light so long as light does no harm? But the fellow with the big "forgettery" might forget to darken his cellar until after much harm has been done. Page 771.

AN INDEX TO AN INDEX.

I fear Mr. F. L. Thompson's index would itself have to have an index. Page 772.

SCISSORS VS. KNIFE IN QUEEN-CLIPPING.

If I am right on the scissors versus knife question, it is not the cutting off of the queen's leg, nor even half of a leg, that is the main thing to be feared; its a cutting off of a foot, or a part of a foot. Some love their queens so well that they don't want their feet to be in the condition in which men's hands are apt to be in the buzz-saw and shingle-machine regions. This is an old idea, and I was not the starter of it when it did start. I think Mr. Doolittle has spoken of it pretty freely—can't be sure. May have been somebody else whose writing produced the strongest impression on my mind. Somebody (whose suggestion I will warmly second) says, hold a queen's wing in the blades without clipping for a spell, and minutely watch results. Quick as a flash she will put a foot between the blades in the effort to push the scissors away. Finding they cannot be moved she takes it out; but she will probably repeat the effort a great many times. Her movements are so much quicker than yours that seeing the coast to be clear is of no avail. You order your hand to operate at the instant when things are all right; but the fraction of a second that has to pass between the mental order and the hand's execution is just the time when she pushes at the scissors once more and gets a mained foot. And her master never (that is to say, hardly ever) takes pains to know what he has done—never mained a queen in his life. The proposition is that *mathematically it can't very well be otherwise* than that a considerable percentage of queens clipped with scissors in the most common styles have a mained foot—and that Dr. Miller has a lot of them this minute. Hope the brethren will "peel their eyes," and put on big specs, and just honestly see once. As for me, I confess I don't *know*. I only cogitate. Page 771.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

Wants to Increase Fast.

I am desirous of increasing my apiary as fast as possible the coming season.

1. Would it be advisable to allow a colony to cast a prime swarm, hiving it on the old stand, then divide the frames of the old hive into 2-frame nuclei, allowing but one queen-cell to each set of 2 frames?

2. If advisable, how much time should elapse from the casting of the swarm until dividing? I wish to secure as much honey as I can together with increase, and these question are based on the supposition that swarming will occur during May and June. ILLINOIS.

ANSWERS.—1. There is a sort of discrepancy in your questions. In the first place you say you want to increase as fast as possible, and afterwards that you wish to secure as much honey as you can together with increase. There is an old saying: "You can't have your cake and eat it, too." If you want to increase as fast as possible you must give up the idea of surplus; and if you want to secure as much honey as you can, you must do little or nothing in the way of increase. Answering your questions specifically, it may be said:

1. The plan you propose will favor a good crop of honey, for it will leave *all* the foragers on the old stand, but it will leave the nuclei rather weak. A little change of program will not interfere seriously with the honey-crop, and will leave your nuclei in better working order. When the colony swarms, leave the old hive on its stand and set the hive with the swarm as close beside the old hive as possible. A week later take away the old hive and use its brood for nuclei, setting the swarm in place of the old hive. The field-bees of the mother colony will to a large extent join the swarm, but so many young bees will have hatched in the old hive that the nuclei will be strong in bees.

2. As already said, the division will be made about a week after the issuing of the swarm. Are you not setting the swarming period rather early for northern Illinois? You are just about as I am, and bees in this locality are more likely to swarm in July than in May.

Langstroth-Simplicity Hives.

How many Langstroth-Simplicity 8-frame hives are made the same size? The reason I ask this question is, I sent to one firm for hives, and to another for extra supers of the same size and make, but they didn't fit.

WISCONSIN.

ANSWER.—It is an unfortunate circumstance that it sometimes happens that two different concerns use different measurements for things that go by the same name. Generally, however, there is a standard size for things that have a recognized name, and a super professing to fit a Langstroth-Simplicity hive ought to do so, and in case it is by some mistake of the wrong measurement you will probably find that the manufacturer will be ready to rectify the error.

Queens Getting Through an Excluder.

On page 12, Charles M. Darrow says:

"I will have to call Dr. Miller's attention to the fact that I had a laying queen that crawled through the queen-excluder (a new one) and laid eggs in the extracting-super. She was a good-sized queen at that; of this I am positive."

From that, one would suppose that I had said something understood by Mr. Darrow to teach that such a thing would not happen, and I wish I knew what it was. I should expect a queen to pass up into an extracting-super in any case where the perforations were sufficiently large. The case is different with a section-super. It is a rare thing for a queen to go up and lay in sections that are *filled* with foundation, even if no excluder is used.

Cellar-Wintering—Shaken Swarms—Extracting—Amount of Stores for Winter—Large Yields—Catnip or Sweet Clover.

1. I have 40 colonies of bees in the cellar, and the most of them have plenty of honey now. The cellar is under a part of the house where there is no fire. It is rather damp, water standing in it every time it rains much, in the fall or summer, but dry when it is frozen up. Now the point is, how cold will I have to keep it? It has been about 35 or 36 degrees since I put the bees in. My idea is that it would be better to have it 38 or 39 degrees, as it is a damp cellar and liable to mold the combs. What do you think about it?

2. I don't want my bees to swarm naturally next summer. Suppose I take two brood-combs, about May 25 or the first of June, from each colony, with what bees that will stay on them, and put them in an empty hive, then take 6 more brood-combs from each colony, shake all the bees off of them and put them in with the new queen. Don't you think that would be all right for a shaken swarm? By that time the old colony would have 4 combs left in a 10-frame hive.

3. How many stories do you think a colony of bees ought to have to extract from? I extracted from the brood-combs last summer, just having the lower story, and got 80 pounds of white honey. Could I have gotten more if I had on one or two more sets of combs?

4. I have a colony of bees with a super of sections on, partly filled with honey, and the bees are all up in there. Will the bees go down in the lower story when they eat the honey, or will they stay up there and die?

5. A bee-keeper here told me that a colony of bees ate 15 pounds of honey in October, 10 pounds in November, but 5 or 6 pounds would last them until the middle of March. How much does a good colony of bees require each month, from the first of November until the first of May?

6. Do you think it possible to get from 250 to 300 pounds of honey from one colony of bees, in one season? It looks rather big to me.

7. Which do you think is the better to sow around in by-places for bees, catnip or sweet clover? WISCONSIN.

ANSWERS.—1. I think there would be less mold, and the bees would do better, if you have it warmer, say about 45 degrees.

2. The great trouble with the plan is that you could not have queens of the best character by letting such nuclei do all the work of queen-rearing. Until the young queens are nearly ready to emerge from their cells, it is better to have the cells surrounded by a strong force of bees.

3. With 10-frame hives, one upper story might do if you extract often enough. If you do not extract till the honey harvest is over, then enough stories should from time to time be added so that there would never be any lack of room for storing. From this you will see that the number of stories depends much upon the strength of the colony and the goodness of the season. One story might be enough, and five might be needed. It is quite possible you might have had more honey with more room. If there were no objection against extracting from the brood-combs, a sufficient one would be that there is danger of throwing larvæ, and of spoiling the honey by throwing out the pap of the young bees.

4. That depends. If it should be warm enough, they will move down, providing, of course, that there is honey below. If too cold they will die on the empty sections. You could help matters by moving the hive into a warm room (better at night) and giving them time to make the change, of course fastening the bees in the hive with wire-cloth.

5. There is such a variation as to make it impossible to give an exact answer. The practical point is to know what will be safe. While one colony might use only 10 pounds of honey from the first of November till the first of May, another may use three times as much. It will do no hurt to let the first have 30 pounds, but it would do a lot of hurt to give the second only 10 pounds; so the wise plan is to give too much rather than too little.

6. Oh, yes, there have been greater yields than that.

7. Sweet clover, if the ground is to be trodden down much; I don't know which, if the ground is protected.

Will the Bees Winter Well?

The year just closing has been the poorest for bees and honey of any year in the past 30, to my knowledge. My bees built up strong and were put in their winter "overcoats" in good shape, and left on the summer stands. I say in *good shape*, but others may differ from me in regard to ventilation, which is only at the entrance, narrowed down to 7 inches long by 3/8 inch wide, and 2 inches of sawdust on all sides and top. Have I done right to have the bees winter well? Or should I have gone around and *cracked* the tops all loose and put something under them to give *upward* ventilation? I know this has been advised by many old heads, but is this correct? I have my doubts, and think the bees know best, else they would not be so *sticky* in warm weather when they will persist in sticking up every crack and crevice, no difference how warm the weather. And the closer the top of the hive is *stuck* up, the warmer it will be, and the more honey you will get. So? ILLINOIS.

ANSWER.—So far as possible the covers of my hives are all left glued tight. But, then, my bees are wintered in the cellar. If they were wintered outside, I should want something else than a single board over them—either under or over the board—something to keep them warm. The bees are warmer with all glued tight, so long as all keeps dry. But if a lot of moisture from the bees should settle and freeze on the cover, and should then thaw again and come dripping down on the bees, they might be worse off than if the moisture had been allowed to escape.

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  Excepting his alone,
And this the Doctor hurls at us
  In no uncertain tone.

But in a sortie up H. Alley—
  Which proved to be not blind—
He found it hot on either side,
  And hotter still behind;

And ere he reached the end of it
  He ran against a Root
Which "shook" him up in Ernest,
  And barred his way, to boot.

And after all the Doctor's said,
  And all the Doctor's done,
I doubt if from his favorite plan
  One queen-breeder he has won.

From their years of wide experience
  His charges seem so brittle,
That to change the course of queen-breeding
  He surely will Doolittle.

And he must think he's bullet-proof,
  Or else he is a "Shriner,"
To face the great guns of the craft,
  Including Brother Greiner.

Volusia Co., Fla., Dec. 15, 1902.

Ginseng Growing and Bee-Keeping.

In reply to F. Durant's question on page 812, I would say, as a rule, it takes ginseng seed 18 months to germinate and grow, and when the plant is 5 years old it is at its best stage to dig for market.

I generally stratify the seed for 12 months, and then plant. I get best results in this way. I have been cultivating ginseng for some years. It is easy to cultivate, and goes well with bee-keeping. It takes some time to get started in business, but after once started, by planting the seed every year you can have a nice bed of roots to harvest every year, and at present prices it is quite profitable.

W. G. M. SHAFFER.

Berkeley Co., W. Va., Dec. 18.

Little Queens—Robber-Bees.

I hatched out seven queens from a mother direct from the Island of Cyprus. One queen was so small but for her form she could scarcely be distinguished from the workers. I removed a black queen from a hive and introduced her. In two weeks she was as large and fine a queen as you would wish to see, and a splendid layer.

For prevention of trouble from robber-bees I always use cheese-cloth (cheapest grade). I cut the pieces so as to fit tight over the front of the hive, and draw it back and tack on the sides. It gives plenty of ventilation. I use it on hot-beds and cold frames. It is cheap, and with care will last many seasons.

O. M. BLANTON.

Washington Co., Miss.

A Poor Year for Honey.

I am well pleased with the "Old Reliable" for the year that I have taken it, and think it a very good investment. While the past year has been a poor one for honey, I have learned some new things.

I have 39 colonies on the summer stands, some in good shape and some in poor shape. The bees gathered honey here only the first and second weeks in July to amount to any-

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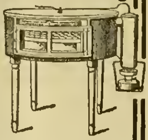

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FREIGHT WE PAY IT **FREE** OUR BOOK HOW TO GROW FRUIT SEND FOR IT
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Great Poultry Book Free!—On another page of this issue of our paper will be found a new season's advertisement of the Cyphers Incubator Co., Buffalo, N. Y. We wish to point out to those of our readers who have seen their annual books and catalogs in the past, that the New Year Book for 1903, entitled "How to Make Money with Poultry and Incubators," now being sent out, is in every way superior to its predecessors. Everything is made so plain that it can be understood by all. Those of our readers who have never seen a "Cyphers" Annual Guide, and are interested in the latest developments in incubators, brooders, poultry food and appliances, should write at once to the Cyphers Incubator Company's nearest office, Buffalo, N. Y., Chicago, Ill., Boston, Mass., or New York City, N. Y., and they will send a copy free, postage paid (during next 30 days only) *providing* you mention the American Bee Journal.

Catnip Seed Free!

We have a small supply of fresh, clean CATNIP SEED on hand, and will mail free, two ounces of it, to any present paid-in-advance subscriber of the American Bee Journal for sending us **One New Subscriber** for one year with $1.00.

Two ounces of this seed will give you a good start of one of the best honey-producing plants known. We will also send to the new subscriber on this offer the rest of this year's Journals free. Address,

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thing, but the prospects are good for a good crop of honey next season, if the winter is not bad on white clover. The fields are well covered with it.
S. A. PALMER.
Henry Co., Ohio, Dec. 24.

A Poor Honey-Year.

We had a poor year here, although the fall was beautiful. No cold weather until to-day. The few bee-men I know say the nights were too cool and dews too heavy for bees to gather much honey. Those who had combs already built, and extracted what was brought in, got a moderate amount. I tried for comb honey, and had no combs built, so got very little.
P. T. LEMASTER.
Spartanburg Co., S. C., Dec. 26.

Osmosis and Atavism.

I wish you would get some of your contributors to write an article on Osmosis, and so shut off reference to the "umbilical cord" in bees. It is a very interesting study, and I should enjoy seeing it followed.

I note Cheshire declines to consider the legs which appear for so short a time on the larva as referable to atavism. Can you tell me what theory *is* accepted? (See Cheshire, Vol. I, page 240.)

By the way, I have a very simple plan for amateur introduction of queens which I have found useful. Shall I send you a sketch?
GEORGE W. ADAMS.
Essex Co., Mass., Dec. 26.

[Perhaps Prof. Cook will help out on the subjects suggested.

Yes, we will be glad to publish your method of introducing queens.—EDITOR.]

A Surprising Season—Feeding Bees.

Last season was one of surprises all through. It began with a fair promise of another drouth equal to the previous year, or, even worse; but May 3 we were surprised with the heaviest rain that had visited us for about two years, and the rains kept right on surprising us once or twice a week all through the season. September 13, Jack Frost surprised about 60 percent of the corn before it was ready for it, and killed what honey-producing flowers remained, cutting off as nice a flow of honey as I ever knew at any time of the year.

I started the season with 21 colonies, very light in stores; I fed them right along until well into June, when they were able to care for themselves. The first two weeks of July they stored about 200 pounds of white clover, partly basswood, in the sections, and did considerable swarming. Then the honey-flow stopped—I supposed for good, on account of the wet weather, but from August 21 to September 10 the bees surprised me by storing a good 1000 pounds of honey in the sections, besides all of them laid in plenty of stores in the brood-chamber for winter. My "round up" for the season is 1200 pounds of honey, and an increase to 32 colonies, all strong in bees, and heavy with winter stores.

I lay the strength of the colonies to the feeding in the first part of the season, which I did in this way:

I secured a lot of empty fruit-cans, from half a pint to a quart capacity each; filled them with granulated-sugar syrup, placed a thick cloth over the top, and a small piece of board over that, then turned the whole bottom up on boards laid over barrels on the opposite side of my shop from the apiary, so the bees could fly over or around the shop to get at the feed. There being no other bees kept nearer than two miles as the bee flies, I had no trouble with neighbors' bees, and, I will add, not a single case of robbing, as I have had when trying to feed inside the hives; and not a colony injured by wax-worms this season.

While this method of feeding is not "according to the books," it has proven very successful, and perfectly satisfactory with me. I made the syrup quite thin, so the bees could suck it out through a cloth. Of course, I removed the cans on days when the weather was not suitable for the bees to fly.

Besides looking after my bees, I have made

SPRAYING
Our line of sprayers and appliances fits every man's needs.
Hand, Knapsack, Bucket, Field, Barrel, and Power sprayers, twenty styles. Best nozzles made, attachments formulas etc. Select the useful and reliable. Catalog free
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My 1903 catalogue. Elegant in illustration, full of practical hints, describes 56 breeds of prize winners. Low prices for birds and eggs. Book postpaid, 10 cents. Calendar for 1903 on cover.
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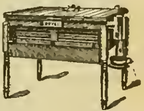
Liberal Discounts to the Trade.



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for an incubator you have not tried, when you can get the best, the **Royal Incubator,** on 30 days free trial. It is entirely automatic and certain in results. Try one. Catalogue free.
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Clay Center, Neb., or Columbus, Ohio.

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The Emerson Binder

This Emerson stiff-board Binder with cloth back for the American Bee Journal we mail for but 60 cents; or we will send it with the Bee Journal for one year—both for only $1.40. It is a fine thing to preserve the copies of the Journal as fast as they are received. If you have this "Emerson" no further binding is necessary.

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There was more money made by Farmers and Gardeners in 1902 than in any previous year in the history of the United States. 1903 will equal if not excel it. Good seed is scarce—buy early.

Johnson & Stokes' Garden and Farm Manual for 1903 illustrates by photographs and describes some of the greatest **Money Bringers** ever offered. Shall we send you a copy? It is free. **Sparks' Earliana Tomato** has no competition in the extra early class—enormously productive of large, fine, smooth, solid fruit. Has made more **hard cash** for our customers than anything ever before introduced by any seedsman. Pkt. 20c. oz. $1.00. Our Manual is illustrated by direct photographs and is **free.** Shall we send you a copy?

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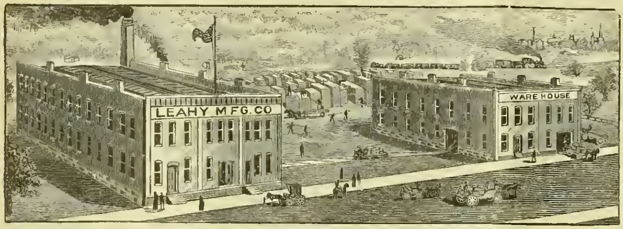

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HIVES, SMOKERS, EXTRACTORS, FOUNDATION
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And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5lb	10lb	25lb	50lb
Sweet Clover (white).....	$ .75	$1.40	$3.25	$6.00
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Prices subject to market changes.

Single pound 5 cents more than the 5-pound rate, and 10 cents extra for postage and sack.

Add 25 cents to your order, for cartage, if wanted by freight, or 10 cents per pound if wanted by mail.

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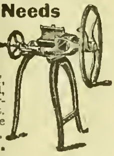
Every Chicken Man Needs a green bone cutter.

The Adam



alone is ball bearing, it cleans itself, it cannot become clogged or choked, it is fed at the pleasure of the operator. You will want to know of it. Send for our Illustrated Catalogue No. 9 before you buy. Sent Free.

W. J. ADAM, Joliet, Ills.

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SELF REGULATING AND AUTOMATIC MOISTURE | INCUBATORS AT CUT PRICES | 2 YEAR GUARANTEE
$4.49 for 50 EGG SIZE | $7.99 for 100 EGG SIZE | $11.49 for 200 EGG SIZE | WHY PAY MORE
INVINCIBLE HATCHER CO. | No. 53 CAT. FREE ESTD. 1893 | SPRINGFIELD, OHIO.

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DAIRYMEN ARE DELIGHTED to meet those who work for us. Cow keepers always have money. We start you in business. You make large profits. Easy work. We furnish capital. Send 10 cents for full line of samples and particulars.

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Root's Goods at Root's Factory Prices.

Complete stock for 1903 now on hand. Freight rates from Cincinnati are the lowest. Prompt service is what I practice. Satisfaction guaranteed. Langstroth Portico Hives and Standard Honey-Jars at lowest prices.

You will save money buying from me. Catalog mailed free. Send for same.

Book orders for Golden Italians, Red Clover and Carniolan Queens; for prices refer to my catalog.

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it my business to chase up the hens, about 125 of them, and have gathered and sold eggs to the amount of $83.76, besides what were used in the family, and raised chickens.

I was greatly shocked and pained to learn of the tragic death of Dr. A. B. Mason. Of course, I knew him only in bee-literature, and as a lover of bees, and respected him as such, as I am inclined to feel toward all men—and women, too—engaged in that business.

A. F. Foote.

Mitchell Co., Iowa, Dec. 15.

Growing Ginseng.

In reply to F. Durant, on page 812, I will say: It takes ginseng seed 18 months to germinate. For instance, seeds gathered and planted in the autumn of 1902 will not come up until the spring of 1904. The roots will reach their best size in six years from seed, when they should be taken up and dried. Young plants begin to bear seed when two years old.

C. W. Bradish.

Lewis Co., N. Y., Dec. 23.

Lost in Winter and Spring.

There was a general loss of bees last winter and spring, with nearly every one that had bees. I lost all my colonies but one, and it was very weak; I got no surplus honey from it until in the fall. Nearly all others were in the same way. Cold winter and late spring were the cause of loss and failure; the bees are in better shape for winter now than they were a year ago. We hope they will do better next year than they have for two years past.

H. M. Sherfey.

Washington Co., Tenn., Dec. 29.

A Report from Washington.

I started last spring with 7 colonies, which were on the place I bought. I paid $2.00 a colony. I took hold of them June 1, and to my surprise I found them in very poor condition—they had apparently had very poor attention, combs built in every which way, and too late in the season to straighten them, so I concluded to let them alone until next spring, when I shall try to put them in proper shape.

I have the black bee, or nearly so, but will improve the stock just as soon as I can. I increased to 14 colonies, and, as near as I can tell, they are all in good condition, with plenty of stores to winter. Bees are wintered on the summer stands here, without any protection, with only a little chaff on top to keep them dry. My bees have been flying almost every day up to this time.

Judging from what my bees did the past summer, and from what I can learn of those that have kept bees here in the past, I would call this a fairly good bee-country.

Two of my colonies proved to be of no account, or at least did not store any surplus. So from 5 colonies, spring count, I received over 500 well-filled sections of nice, white honey, as nice as I had when keeping bees in Chicago. I can sell it right here in town at 12½ cents a piece or section.

Our principal honey-plants are alfalfa and sweet clover. Our honey season here is a trifle longer than in Chicago. We get our surplus from June 10 to the middle of August.

I shall try to increase from year to year, and if I find the business profitable I may devote all my time to bees in a few years.

I certainly love to be around bees. It makes my heart glad to hear their hum. I do wish you could be with me about the middle of April, when my 10-acre apple-orchard is in full bloom—everything white with blossoms; it is a sight to behold, and to hear the "Hum of the bees in the apple-tree bloom," a regular bee-paradise.

I enjoy the old American Bee Journal as much as ever, and would not like to be without it; if anything, I read it with greater interest since I am out here than I ever did before.

Wm. Miller.

Yakima Co., Wash., Dec. 9.

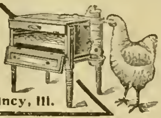
[Mr. Miller lived in Chicago until last spring, when he removed to Washington. He was one of our intimate neighbors, and was very successful with bees. In fact, we do not recall any one else who was such a successful beginner as was Mr. Miller. We wish him and his delightful family all kinds of good luck in their new and far-away home.—Ed.]

CONVENTION NOTICE.

New York.—The annual meeting of the Oswego County Bee-Keepers' Association will be held at Fulton, N. Y., Saturday, March 7, 1903. Prof. Frank Benton will be present and address the meeting. An interesting program is being prepared, and all persons interested in bees are cordially invited to be present.

MORTIMER STEVENS, Pres.
CHAS. B. ALLEN, Sec.

$12.80 For 200 Egg INCUBATOR
Perfect in construction and action. Hatches every fertile egg. Write for catalog to-day.
GEO. H. STAHL, Quincy, Ill.



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Our motto in all departments is "Maximum efficiency at minimum cost."

Our scholastic training is equal to the best, our reputation first-class. All expenses for a year, aside from the clothing and traveling, less than $200.00. Co-education, health conditions, moral and religious influence, superior.

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when the hens lay. Keep them laying. For hatching and brooding use the best reasonable priced Incubators and Brooders — built upon honor, sold upon guarantee,
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1-lb Keystone ...Honey-Jars

These are clear flint glass jars holding just one pound, and the shape of a keystone. They are 7⅛ inches high, and very pretty when filled with honey. The corks can be sunk a trifle below the top, and then fill in with beeswax, sealingwax or paraffin. We can furnish them in single gross lots, with corks, f.o.b. Chicago, at $3.50; two gross, $3.25 per gross; or five or more gross, at $3.00 a gross. These are the cheapest glass one-pound jars we know anything about. We have only a few gross of them left. So speak quick if you want them. Address,

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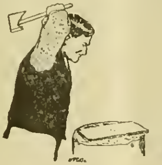
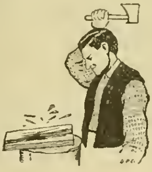
The Iowa Round Incubator.—When the Iowa Round Incubator was first introduced there was considerable discussion concerning the radical departure it made in incubator construction. Incubators had been made square so long that people were inclined to think that was the proper way to build them. Then the proprietors invented the catch-line, "No cold corners," and at once thinking people began to understand the advantage of an incubator in which the temperature could be kept exactly at the same degree in all parts of the egg-chamber.

While the principle was always right, and the Iowa has been a success from the very first, a constant effort has been made to improve the construction of them. The heating apparatus, the regulator, the ventilation were all perfected, but it was felt that the liability of wood to shrink, swell, warp, crack and split left something to be desired in the way of material from which to construct the case or body of the machine. Metal would not do, for it expands and contracts under varying temperatures, and corrodes under all circumstances. Finally "trunk board," a fiber board used for making trunks that cannot be smashed, was hit upon. This trunk board is capable of being bent so as to make the case of the Iowa Round Incubator one solid piece except where the ends are joined together. Trunk board does not shrink, swell, warp or crack, and it cannot be split even with an ax. It is water and air proof and yet light and strong. No material ever invented is so perfectly adapted to the use to which it is put as is trunk board for the Iowa Round Incubator.



Trunk Board Doesn't Split.



Wood Splits Easily.

They have just published a little book telling all about their incubators and brooders, which contains much valuable and interesting information. This book together with other printed matter, will be gladly sent to any of our readers who will ask them for it and mention this paper. All requests should be addressed to Iowa Incubator Co., Box 198, DesMoines, Iowa.

$300,000,000.00 A YEAR and you may have part of it if you work for us. Uncle Sam's poultry product pays that sum. Send 10c for samples and particulars. We furnish capital to start you in business. Draper Publishing Co., Chicago, Ill.
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HONEY AND BEESWAX
MARKET QUOTATIONS.

CHICAGO, Jan 9.—The demand is not more than usual; hence stocks are sufficient, especially as Cuba has now comb honey on this market. This is a new source of supply, and is a factor that must be reckoned with, as it obviates the necessity of laying in a stock during the summer and autumn to draw from in the winter and spring months. The best grades of white comb sell at 15@16c per pound, with travel-stained and light amber, 13@14c; darker grades, 10@12 Extracted, 7@8c for white, and 6@7c for ambers. Beeswax steady at 30c.

R. A. BURNETT & Co.

ALBANY, N. Y., Jan. 7.—Honey demand and receipts light. We quote white comb, 15 cents; mixed, 14c; buckwheat, 13@14c. Extracted, white, 7@7½c; dark and buckwheat, 7@7½c. More demand for buckwheat than any other here.

H. R. WRIGHT.

BOSTON, Oct. 20.—Our honey market remains firm, with good demand and fair stocks on hand. Honey is not coming forward as fast as usual, and the tendency of prices is steady. We quote our market as follows: Fancy white 1-pound sections in cartons, 16c; No. 1, 15c; No. 2, very light supply, 14c; glass-front sections generally one cent less than this. Extracted, light amber, 8c; amber, 7½c.

BLAKE, SCOTT & LEE.

KANSAS CITY, Dec. 20.—Market steady at quotations. We quote fancy white comb, per case, 24 sections, $3 50; No. 1 at $3.40; No. 2 white and amber, $3 25. Extracted, white, per pound, 7@7½c; amber, 6@6½c. Beeswax, 27@30c.

C. C. CLEMONS & Co.

CINCINNATI, Jan. 7—The demand for all kinds of honey has fallen off considerably in the last few weeks, owing to the many other sweets offered at this season of the year. Lower prices are no inducement to increase the consumption, as the demand is not there, and will not be until about the end of the month; consequently it is folly to offer at lower prices. We quote amber extracted in barrels at 5¾@6½c; white clover and basswood, 8@9½c. Fancy white comb honey, 16@17c; lower grades hard to sell at any price. Beeswax firm at 29@30c.

THE FRED W. MUTH Co.

NEW YORK, Dec. 23.—The market on comb honey is dull and inactive. While the supply is not large the demand has fallen off to a large extent and prices show a weakening tendency. We quote fancy white at 15c; No. 1, 14c; No. 2, 13c; and buckwheat at from 10@12c. Extracted is in fairly good demand; white, 7½c; light amber, 6½@7c; dark, 5½@6c. Beeswax firm at from 28@29c. HILDRETH & SEGELKEN.

CINCINNATI, Jan. 3.—The comb honey market is a little quiet, almost everybody being filled up. As there is hardly any new supply in, there is no change in prices, viz.: Fancy water-white, 16c; off grades less. The market for extracted white clover shows a slight advance. Fancy water-white brings 8½@9c; alfalfa water-white, 6½@7½c; amber, in barrels, 5¼@5½c. Beeswax, 27@28c.

C. H. W. WEBER.

SAN FRANCISCO, Dec. 17.—White comb honey, 11½@12½c; light amber, 10@11c; dark, 5@6½c. Extracted, white, 6@6½c; light amber, 5@5¼c; amber, 4@4½c. Beeswax, good to choice, light, 26@27½c; strictly fancy light, 29@30c.

The bulk of California produced honey is sold for Eastern shipment in carload lots from producing points at bottom price. Small lots of choice honey that can be used in local trade bring more. Quotations here given are current prices to producer, f.o.b. shipping point, on Eastern basis for extracted and California basis delivery point subject to agreement for comb.

WANTED WHITE CLOVER EXTRACTED HONEY!
Send sample and best price delivered here; also Fancy Comb wanted in no-drip cases.
THE FRED W. MUTH CO.
32Atf Front and Walnut, CINCINNATI, OHIO.
Please mention Bee Journal when writing.

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etc. We can save you money. Send list of goods wanted and let us quote you prices. ROOT'S GOODS ONLY. Send for Catalog.
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Please mention Bee Journal when writing.

BEE-KEEPERS,
Save Money by Buying
Hives, Sections, Brood Frames, Extractors, Smokers, AND EVERYTHING ELSE YOU NEED, OF
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Send for our large illustrated catalog, and copy of
THE AMERICAN BEE-KEEPER,
a monthly for all bee-keepers; 50c a year. (Now in 12th year. H. E. HILL, Editor.)

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25 years the best.
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Tip-Top Glass Honey-Jars

The picture shown herewith represents the best one-pound jar for honey that we know of. It is made of the clearest flint glass, and when filled with honey, and a neat label attached, it makes as handsome a package as can be imagined. Its glass top sets on a flat rubber ring, and is held in place by a flat steel spring across the top as shown in the picture. It is practically air-tight, thus permitting no leak, which is an important thing with honey-sellers.

We can furnish these jars, f.o.b. Chicago, at these prices: One gross, $5.00; two gross, $4.75 a gross; five or more gross $4.50 per gross.

If you try them once you will likely use no other kind of top or sealing arrangement for honey jars.

GEORGE W. YORK & CO.
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ROOT'S GOODS AT ROOT'S PRICES.
Everything used by bee-keepers. POUDER'S HONEY-JARS. Prompt service. Low Freight Rates.
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This is a book of over 500 pages, like some of the previous editions, has been brought clear up to the times. Even brushed and "shooked" swarms are mentioned and described under the head of "Swarming." The latest methods of bottling honey are given under the head of "Extracted Honey." A new list of honey-plants, especially those found in the South and far West, particularly those that are big yielders of honey, have been incorporated, and many new engravings have been inserted here and there.

If there is any particular feature in which this edition is different from all others, it is in the fact that it is written to conform to nearly every locality in the United States. When the book was put out in 1878, the instructions were intended more particularly for those who lived in the North Central States. But the several trips of the reviewer over various portions of the United States from time to time have led to some modifications here and there—particularly details of management. The subject of Swarming, for instance, has been modified to fit the conditions as they exist in Texas, California, and the far West, as well as the Eastern and Central States of the North. Several new articles have been inserted. Among them is one on Locality. This chapter goes into detail showing how one State or Province differs from another; and how methods of management must be varied to fit special conditions.

A B C of BEE CULTURE

The subject of Wax-Presses has been thoroughly overhauled, showing rendering and pressing in open air, in hot water, and in steam.

In the matter of Wintering, again special instructions are given for the Southern and Western bee-keeper where wintering protection is not necessary, but where there is danger of starvation.

The biographical department has been largely revised, and new subjects have been added to take in some of those bee-keepers who have lately risen to prominence in the bee-keeping world.

The picture gallery, while it has some of the old well-known views, has a number of new ones, particularly some in the West and South.

As usual the book has been enlarged, and, altogether, we are putting out for 1903 an edition that is new from cover to cover, or is as nearly such as it could be if it were written during the latter part of 1902, word for word, paragraph for paragraph throughout the entire book. The fact that it has been kept standing in type during all these years has made it possible to make changes anywhere at any time when necessary.

Price, in cloth, by mail $1.20; or clubbed with Gleanings in Bee-Culture one year, both post-paid, $1.75.

The A. I. Root Company,
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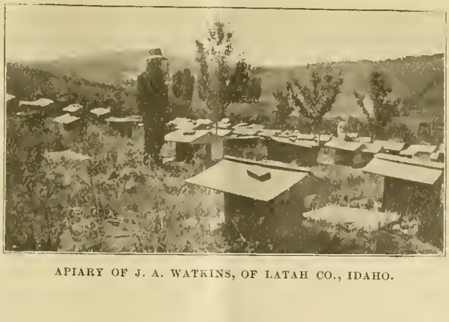
AMERICAN
BEE JOURNAL

43d Year. CHICAGO, ILL., JAN. 22, 1903. No. 4.

WEEKLY

HIVING A SWARM.



APIARY OF J. A. WATKINS, OF LATAH CO., IDAHO.

THE AMERICAN BEE JOURNAL.

PUBLISHED WEEKLY BY

GEORGE W. YORK & COMPANY

144 & 146 E. Erie St., Chicago, Ill.

Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

EDITOR,

GEORGE W. YORK.

DEPT. EDITORS,

DR. C. C. MILLER, E. E. HASTY, EMMA M. WILSON

IMPORTANT NOTICES.

The Subscription Price of this Journal is $1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

The Wrapper-Label Date of this paper indicates the end of the month to which your subscription is paid. For instance, "dec03" on your label shows that it is paid to the end of December, 1903.

Subscription Receipts.—We do not send a receipt for money sent us to pay subscription, but change the date on your wrapper-label, which shows you that the money has been received and credited.

Advertising Rates will be given upon application.

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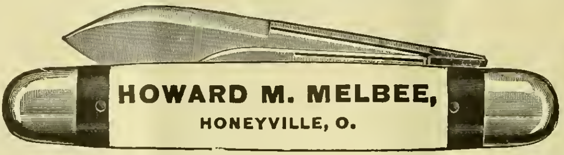
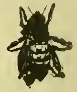
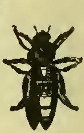
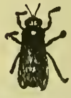
Your Name and Address on one side—Three Bees on the other side.









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How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

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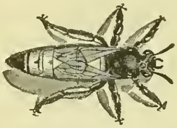
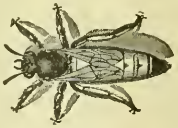
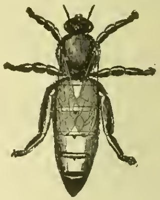




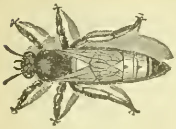


An Italian Queen Free

IN MAY, 1903

To Regular Paid-in-Advance Subscribers Only.

We wish to make a liberal offer to those of our regular readers whose subscriptions are paid in advance. It is this: We will send you FREE by mail, in May, 1903, an Untested Italian Queen for sending us $1.00 and the name and address of a NEW subscriber to the American Bee Journal for a year. This is indeed a big premium, as the queen alone would cost you 75c.



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George W. York & Co., 144 East Erie St., Chicago, Ill.

ESTABLISHT IN 1861
AMERICAN BEE JOURNAL
THE OLDEST BEE-PAPER IN AMERICA

43d YEAR. CHICAGO, ILL., JAN. 22, 1903. No. 4.

✻ Editorial. ✻

The Pure-Food Bill has passed the National House of Representatives by a vote of 72 to 21. It prohibits the introduction into any State or Territory of any article of food or drug which is adulterated or misbranded. Having gone through the House with so little opposition, it ought to go through the Senate with a whoop; but just by way of making a sure thing doubly sure, it would be a good thing for each bee-keeper to sit him down as soon as he reads this, and compose a short epistle to his Senator, urging the passage of the bill.

◆

Bees Working in a Tent.—In the American Agriculturist we are told that Mr. Bunce tried growing cucumbers in a tent, and not a cucumber set until the doors of the tent were opened to allow the entrance of bees, and then some grew large enough for small pickles. It says further:

> "The presence of bees in a tent is considered by Mr. Bunce indispensable to success. He thinks if the doors of the tent were left open in the middle of the day, bees would come in. When asked if other and unwelcome insects would not also enter, he replied that the moth producing the tobacco-worm flies only at night. He says *strawberries have been grown under cloth* on Long Island with brilliant success, the fruit maturing two weeks earlier than in the open. But bees must be allowed free entrance."

◆

Southern Honey.—Some of the bee-keepers in the South object in vigorous terms to having their product called "southern" honey. And why not call it so? Is not all honey produced in the South "southern honey?" And yet it sometimes happens that a thing that looks all right on the face of it may be all wrong. If the term "southern" honey has come to mean honey of a decidedly inferior character, one can hardly wonder that a man who produces what he knows to be honey of a superior character, even though it be produced in the South, should object to having applied to it a term that labels it of inferior quality.

Editor Hill, at present himself a Southerner, voices the sentiment of up-to-date Southern bee-keepers, by saying among other things:

> "It is doubtless a fact that the South puts upon the market a larger percentage of low-grade honey than any other section of the country. The unprogressiveness of many sections of the South is well known. The product of the 'bee-keeping' element in such localities, as well as that of other branches, is necessarily inferior; but this is no reason why the up-to-date producer of the South should have to suffer the stigma which belongs, obviously, to a product which he has not been guilty of placing upon the market."

And this time he is right.

◆

Butter and Honey.—"Honey," says the American Bee-Keeper, "is frequently recommended as a substitute for butter, to spread on bread; but no one appears to have observed the fact that butter and honey constitute a combination that's not at all disagreeable to take."

Yes, that's a combination not to be despised, one that was held in high esteem centuries ago. Said an ancient writer (Isaiah), "Butter and honey shall he eat, when he knoweth to refuse the evil, and choose the good."

◆

General Manager's Explanation.—On page 20 is an editorial on "The Election of the National," in which we called attention to several errors and irregularities, besides giving a letter from Mr. N. E. France, who also asked that a new ballot be taken. The reasons why a new ballot was called for were stated.

We have now received the following letter from Mr. Secor to President Hutchinson, the latter saying, "I think, in justice to him [Secor], it ought to be published:"

FOREST CITY, IOWA, Jan. 5, 1903.

W. Z. HUTCHINSON, Pres. Nat'l B.-K. Ass'n.

My Dear Sir:—I have your recent letter in which you state that there is some dissatisfaction among some of the members of the Association in regard to the form of the ballot recently sent out, and because there were no constitutional amendments submitted.

I am sure that any fair-minded member, when he learns the facts in the case, will exonerate the General Manager from blame in both cases.

The reason why Mr. France's name was mentioned on the voting blank was that he was the *only person* nominated in a proper manner. His name had been regularly presented to the Chairman of the Board, and seconded by at least half a dozen members. It, therefore, came to me officially, and I was obliged to notice it.

It may be said that other names were mentioned through the bee-journals. Granted. I now think I remember one person who nominated *three or four members for the same office* in this manner. By what constitutional provision is the Board of Directors, or the General Manager, required to take cognizance of every suggestion that every person may write to periodicals published in the United States? Why were not these nominations made to the proper officials of the Association? Unless these matters are brought to me officially I can not take the responsibility of indorsing them.

Now, as to the constitutional amendments offered at the Denver convention. How could I submit so important a matter as that to a vote without a word from the Secretary? In fact, I never saw a copy of them until after the voting blanks had been sent out, and then only a stenographer's report of them.

Dr. Mason wrote me, just before his death, that he had no copy of the proposed amendments; that they had never been turned over to him. If the Secretary of the Association could not certify what the proposed amendments were, how could I be expected to take the responsibility of interpreting them? I said before, and now repeat, that I did not see even a purported copy of the amendments till after the voting blanks had been printed and mailed.

If we do not wish to be governed by constitutional authority why have a constitution?

If we do not practice business methods, and follow parliamentary usages, our Association is but a rope of sand, and not worth saving.

I hope soon to turn over to my successor the records and funds of the largest and most prosperous bee-keepers' association in the world; and if we will stop our quibbling about unimportant matters, and put our shoulders to the wheel in the spirit of fraternal helpfulness, the future of the Association will be brighter than ever; but if factionalism and love of office prevail, it will be rent in twain and die a premature death.

Sincerely yours,
EUGENE SECOR, *Gen. Man.*

There are several points in Mr. Secor's letter of explanation which we would like to touch on in full, but we must be brief.

In the first place, we contend that Mr. France's name should have been omitted from the ballot, for it was not necessary that any one be nominated at all, nor necessary to print names of nominees on the ballot. Why, a person not previously nominated might have been elected, so the nomination cuts no figure whatever. We can not account for the naming of Mr. France in any other manner, than that some one thought it would be an excellent way to defeat Mr. Abbott, whom the majority of the Board of Directors did elect General Manager last summer.

As to the omission of the amendments from the ballot, Mr. Secor's excuse is rather weak, for he says Dr. Mason wrote him, before he died, about the amendments. It seems to us that a General Manager knowing there were amendments to be presented on the ballot would make at least a little effort to get them. Dr. Mason died the forepart of November, and we did not get our ballot until Dec. 20—surely ample time to find a copy of the amendments if they were really wanted for voting purposes.

We have reason to believe that the intention was not to present the amendments at all, as they were not favored by some in authority. It was the Secretary's duty to get a copy of the amendments before the Denver convention closed, and see that they were forwarded to the General Manager in time for balloting. The General Manager, knowing there were amendments to be voted on, should have insisted on having a copy of them to mail with the ballot to the members, as provided by the constitution.

We may say further, that we think it will hardly pay any officer to be so red-tapy as Mr. Secor's letter indicates he was; surely, it will not tend to inspire confidence in the Association to follow such a precedent. Also, we think it shows poor taste for Mr. Secor to intimate that the "love of office" is inspiring the opposers to unfair methods, who insist that common-sense and ordinary business practice shall be used in the management of the National Association, when Mr. Secor himself has been in the office of General Manager as many years as he has.

◆

No-Drip Cases Without Paper.—Dr. W. O. Eastwood, finding it troublesome to use paper in shipping-cases, poured in melted paraffine, running it clear around the bottom and then pouring it out. That required only a small quantity, and left the shipping-case with no more chance for leaking than if it contained the paper.

Although this plan must have its limitations (for it can hardly be used with 24-section cases having the bottoms in two parts), it is well worth trying by those who are not expert at using the paper in 12-section cases. It will probably be necessary to nail the bottom at the middle to the back and to the front strip, otherwise the weight of the sections might spring down the bottom and break apart the paraffined joint. If the plan is a success, it will no doubt be found easier for the inexperienced than to use the paper.

Of course, the no-drip strips must not be omitted.

Weekly Budget.

Mr. C. H. Pierce, of Columbia Co., Wis., called on us last week. He expects a good season with the bees this year. His are wintering well.

◆

Mr. N. E. France has been talking on fruit and bees at the farmers' institutes in Wisconsin this winter. He knows how on both subjects.

◆

California Bee-Keepers to Organize.—We have received the following which will be of interest to California bee-keepers particularly:

To the Bee-Keepers of California:—

At the recent session of the State Bee-Keepers' Association, held in this city, the subject of co-operation for the disposal of our product was again presented, and forcibly emphasized by F. E. Brown, the successful manager of the Central California Association.

The necessity of such a movement seems evident to all, but the question of method has been the one great difficulty to overcome. George L. Emerson, the enterprising Orange County producer, presented a plan that met the hearty approval of those present, resulting in the appointment of the following committee to consider and devise a plan of organization: F. E. Brown, George W. Brodbeck, L. S. Emerson, M. H. Mendleson, L. E. Mercer, and J. F. McIntyre. The committee, not being able to complete its task before the adjournment of the State Association, take this method of presenting it to the bee-keepers at large.

The approaching season, the necessity of prompt and decisive action, have resulted in the committee taking steps to incorporate the California National Honey-Producers' Association. The principal place of business will be Los Angeles; capital stock $25,000, divided into 500,000 shares, value 5 cents—each share to represent one colony of bees, thus confining this organization entirely to bee-keepers. Sufficient stock has been subscribed to inaugurate this movement, and insure its undoubted success. With the object of enlisting the interest of all bee-keepers, and for them to learn the details of this project, a meeting has been called to be held at the Chamber of Commerce, in Los Angeles, Jan. 20, at 9:30 a.m.

We further desire to call attention to a few reasons why bee-keepers should combine:

First of all, "In union there is strength."

By joining together, freight-rates, supplies, and other expenses, are reduced to a minimum.

By markiug and sealing our honey we guarantee its purity, thus preventing the possibility of adulteration. The guarantee of purity will increase the demand.

The establishment of uniform prices and grades will prevent individual competition and the consequent depression in prices.

The combination of the small producer with the large one gives strength to the former and removes him from the clutches of the speculator.

The entire management will be in the hands of bee-keepers, with no other interests involved, assuring equal benefits to all. Facilities for storage will be provided. All honey will be graded and sealed by an official grader.

Members will be permitted to retail in less than car-load lots. Advances will also be made on consignments, if desired.

The above are a few of the details which we present for your consideration, and urge your attendance at the meeting called.

Geo. W. Brodbeck, *Cor. Sec.*

We hope this new organization will prove to be what California honey-producers need in order to control the marketing of their product, so that it may be disposed of in a way that will bring good returns to its members. They have a large contract on their hands, but it is well worth pushing to completion, as we believe it will prove a success when once gotten in working order.

◆

Your Name and Address.—We take the following from Gleanings in Bee-Culture, and only wish that it might be read by every person in the world, or at least by all who expect to do any business with others. The experience of The A. I. Root Co., as described in these paragraphs, does not differ from the experience of every other firm:

Every man and woman, and, for that matter, every child, should be urged very early to adopt some particular way of signing his name and address. Yes, as soon as a child can write his name he should be urged to adopt some particular form. If he decides to use only initials, let him always do it the same way. If his name is Smith, in view of the great number of Smiths, he would better spell out in full his first or second name; but, having once decided (perhaps by the aid of his friends) just how he is going to make his signature, let him *stick to it.* And he should also be encouraged to have a rubber stamp to put on his stationery, so that all can know in plain and unmistakable letters just *what* he is called, and *how* he is addressed. Married women especially should heed the above. It is a woman's privilege to write her name Mrs. John Smith or Mrs. Susan Smith; but she should be urged to do always one or the other. A few days ago "Mrs. John Smith" complained that she sent us some money, and we did not give her credit. After much fuss and bother our book-keeper found she signed her name Mrs. *Susan* Smith, and wrote from a different postoffice from what she had ever written before, and, therefore, the bookkeepers were obliged to open an account with Mrs. Susan Smith at some other postoffice; and hadn't one of the employees happened to remember some honey being placed on the book where no account could be found, I do not know what would have been done.

The better way, by all means, is to have your correct name and address *printed* on envelopes or writing-paper, one or the other, or both. It can be done for a few cents. But if this is too much trouble, then get a rubber stamp, and stamp everything you send out, not only to save this great, busy world time and money, but to save *yourself* annoyance and disappointment. Lots of people make haste to call great business firms dishonest, just because these people themselves have not got enough life and push to avoid the trouble of blundering addresses, as I have indicated in the above. If you can not scrape up enough energy to let folks know who you are, and where you live, in black and white, you ought to have been born a century or two ago, when it did not matter so very much whether the outside world knew whether you were alive and kicking or not.

◆

Rev. L. L. Langstroth a Presbyterian.—It seems from the following that through an oversight, or lapse in memory, we made an error in reference to Father Langstroth:

Mr. Editor:—In that delightfully gotten-up periodical, Class Advertising, an article appears which was written by the Editor of the American Bee Journal, all of which I can indorse except the statement that the movable-frame hive was invented by Rev. L. L. Langstroth, "a Congregational clergyman." Father Langstroth would be neither a better nor a worse man for being a Presbyterian rather than a Congregationalist, but it is just as well to be accurate in regard to everything pertaining to one who played so prominent a part.

When 26 years old Father Langstroth was, for two years, pastor of the Second Congregational Church in Andover, Mass., but many years ago he became a Presbyterian. When preparing for Root's "A B C of Bee-Culture" a biographical sketch of Father Langstroth, desiring to be entirely correct, I wrote to him, and in reply he said, under date of March 26, 1888:

"I am now a minister in the Presbyterian church. Although not a settled pastor, I preach occasionally, and delight in nothing so much as the Christian work. My parents were members of Mr. Barnes' church, the mother Presbyterian church in the United States."

I have good reason to believe that he continued in the same connection during the remainder of his life. Last summer, when giving a talk before the Winona Assembly, I spoke of Father Langstroth as a Presbyterian clergyman. Afterward, one of my auditors made the correction that Mr. Langstroth was a Congregationalist. The pastor of the Presbyterian church at Dayton, Ohio, who happended to be present, replied, "Mr. Langstroth was a member of our presbytery, and it was while preaching in my pulpit that he fell dead."

C. C. Miller.

Of course, it is always best to be exactly correct in all statements, but, really, isn't there just about as much difference between a good Congregationalist and a good Presbyterian as there is between tweedledum and tweedledee? We would think just as much of Dr. Miller if he were a Methodist instead of being a Presbyterian! But, after all, it is not the particular denomination that a man belongs to, but his Christian living that counts, not only in the present time, but in the Eternity beyond, if the Good Book be true.

However, we waut to thank Dr. Miller for calling our attention to Father Langstroth's Presbyterianism. We will try to be more careful the next time we have occasion to refer to it.

Convention Proceedings.

Report of the Ontario Bee-Keepers' Convention, Held at Barre, Ont., Canada, Dec. 16, 17 and 18, 1902.

REPORTED BY MORLEY PETTIT.

(Continued from page 39.)

UNITING LATE SWARMS.

"How and when would you unite late swarms?"

In August and September. Set one on top of the other.

Mr. McEvoy—Unite them in the evening. Get the bees to fill themselves, then shake the bees of one hive down on the entrance of the other, and let them run in. Smoke them well.

Mr. Heise—Remove from each hive all the frames not occupied by bees. Lift the remainder with the bees on them out of one hive into the other, and the deed is done.

BEST WAY TO FEED LIGHT COLONIES.

"What is the best way to feed colonies put away too light, no combs of honey being available?"

Feed them cakes of candy put over the frames. This does not disturb them much, and by absorbing the moisture the candy gradually liquefies and also adds to the dryness of the bees.

Mr. Evans told of a man who bored a hole in the top of a box-hive which he had in the cellar, poured in a little feed every few days, and the bees wintered well. He did not recommend this method as one to be generally adopted, however. Mr. Holtermann would feed two or three pounds at one feed, then run the chances on saving them by feeding the first thing after they come out of the cellar. A shallow pan shoved in under the combs on the bottom-board is used in Germany for this purpose.

Mr. Armstrong—I have fed bees syrup every month in the year except February and March. I use a feeder in a super on top of the hive.

Mr. McEvoy—This would be all right for strong colonies, but no good for weak ones.

EVENING SESSION.

The following paper was written and read by W. J. Brown:

WHY I AM A BEE-KEEPER.

This may be considered a very simple subject indeed. I often thought that something outside of the ordinary worn-out subjects of spring management, summer management, the best method to produce comb honey, extracted honey, etc., at our annual reunions was necessary in order to make them a little more interesting. But I hesitated for a time, then after seeing a synopsis of the program for this meeting in the October number of the Canadian Bee Journal, and seeing your humble servant was down for a paper, and that, about the first paper on the list, and without any subject assigned me, I scratched my head for a time, not knowing whether your executive committee was only having a little fun with me on account of my Hibernian strain or not; and I finally concluded that in all probability that was the case, particularly so when they selected that clever young Dutchman over there to knock me down faster than any two of you could pick me up.

My first impulse was to present you with something a little more out of the ordinary than even the one which I have adopted; but remembering that some one, a few years ago, brought in some subjects that received pretty hard knocks because those subjects did not treat directly on bee-lore, I concluded that such ground would not be safe for me to tread upon, and so I decided to tell you why I am a bee-keeper.

First, because of a natural fondness for honey—a fondness that never relinquished its hold, and I never expect that it will. Well do I remember when I was a "kid," how I used to rummage the wild bumble-bees' nests; even to get one drop of sweet nectar made my heart glad.

As manhood advanced, so also my ideas; so then to my joy a box-hive of bees I bought.

My second reason for being a bee-keeper was that my instinct of nature led me on to search, and, if possible, find out the mystery of the mysteries connected with the honey-bee in those primitive days—at least primitive they were to me, as I had not the opportunity of studying standard works on the honey-bee, and bee-papers galore, as you, fellow bee-keepers, have to-day. Yet every moment and every hour of my time that I could possibly spare from other pursuits was taken advantage of in the study of my little workers, and thus add to my joy and knowledge.

My third reason for being a bee-keeper was the great pleasure of having honey (Nature's sweet) on my table three times a day the whole year round, and at being able to treat my friends and neighbors to a feed of honey when they come in; and at hearing the hum of the honey-bee in the apple-tree, the clover field, and elsewhere.

My fourth reason for being a bee-keeper was the financial side of the question, as I had an idea for a long time that there was more money in bee-keeping than in any other line of business on the face of this broad earth. But while my taste for honey is as keen to-day as ever, and my appetite for research in the mysteries of the honey-bee is as ravenous as it was a quarter of a century ago—and there is little even yet that affords me more pleasure than to be able to treat my friends and neighbors to a little honey, and to hear the merry hum of those dear little honey-bees, when they are in the clover and buckwheat fields—I must say I am slightly disappointed in my fourth reason for being a bee-keeper, viz.: the financial side of the question. True, with proper care and management on the part of the manipulator there is money in bee-keeping, but for the one who has made a pile out of it a dozen have made a failure. For my individual part, I have nothing to complain about, in having taken it up as a pursuit, as I like the honey, I like the bee, I like to work among them, and I like to see the dollars come in as the result of my being a bee-keeper.

And now look out and see how Mr. Heise will come along like a hewer in a lumber camp, with his broad-ax, and make the chips fly. But I am here on the ridge-pole, and can fight bees, wasps, or even Dutchmen, as well as any one. So, roll up your sleeves, and get ready to pitch right in and make things lively for a little while, anyway, even if you can not lick me, by showing Mr. President and the cream of bee-keepers of this banner Province of Ontario assembled here this evening, some better reason why you are a bee-keeper than I have shown you why I am a bee-keeper.

W. J. Brown.

Mr. Heise—These reasons would fit most of us, and perhaps the financial reason is the greatest.

SPRING MANAGEMENT.

R. F. Whitesides read a paper on "Spring Management."

Mr. Post—For outside wintering we want things tight and dry, and good packing on top of the hives. Great care must be exercised in spreading brood, not to do it too early in the season. Cellar-wintered bees should be kept in until they can be set out to stay.

Mr. Fixter—Bees should be set out early. We set some out this year on March 22, with a foot of snow on the ground, and they did all right.

Mr. Miller—Queen-clipping should be done in fruit-bloom.

Mr. Dickenson—If snow is on the ground when bees are to be set out, sprinkle some straw around the stands.

Mr. Pettit—Clipping with us in southern Ontario should be done before fruit-bloom, else the hives are so full of bees it is difficult to find the queen.

Mr. Darling sees no advantage in waiting for a suitable day to put the bees out. When the time of year comes put them out in the evening, and they will be quiet until a suitable day comes for them to fly.

Mr. Heise—Early clipping refers to cellar-wintered bees. For those packed outdoors, we do not like to unpack them until it is time to put supers on. I have also noticed that in a prosperous colony it is often easier to find the queen than in one that is very weak.

SPRING PACKING OF CELLAR-WINTERED BEES.

"Would you advise packing in spring for cellar-wintered bees?"

Mr. Miller—I used to do it, but don't any more.

Mr. Holmes—Put newspapers under the cover.

CARING FOR EXTRACTED HONEY.

"How take care of extracted honey?"

Mr. Miller—Put it into cans or barrels as soon as possible, and store in a dry, warm place. Do not leave it exposed to the air.

FREEING COMBS OF POLLEN.

"What is your method of freeing combs from an over-abundance of pollen?"

Mr. Gemmill—Spray them with a fine spray, then throw out the pollen with the extractor.

DEAD BROOD—WIRING FOUNDATION.

"Dead brood in the hive a few days after casting a swarm. What is the cause? The result?"

Mr. Dickenson—This may be caused by turning the parent hive around too often, and so depleting it of bees for the sake of the swarm.

"Is it advisable to wire foundation?"

Mr. Miller—Yes, it enables me to use section foundation in shallow frames.

Mr. McEvoy uses seven vertical wires in the frame, laced back and forth from staples in the top-bar and bottom-bar.

There was a division of opinion on the advantage or disadvantage of wiring, some of Canada's most successful bee-men being on either side of the question.

HIVE-ENTRANCE FOR OUTDOOR WINTERING.

"What size entrance do you prefer for outdoor wintering?"

Mr. Miller—½x1½ inches.

Mr. Holtermann—Whatever style of entrance we have, the top packing must be porous enough to allow of upward ventilation. If the change of air has to be accomplished by the entrance alone, the bees must exert themselves to create a draft, and this is not good.

Mr. Sparling—The nature of the packing above has much to do with good wintering.

Mr. Armstrong could not see that it made any difference whether the top packing was tight or not. The entrance should be ⅜x5 inches.

Mr. John Fixter then read the following description of experiments on the question,

DO BEES INJURE SOUND FRUIT?

During the summer of 1901 an experiment was started when there was no surplus honey to be gathered from plants outside, with ripe fruit of four different kinds—peaches, pears, plums and grapes. These were exposed in different places near the Experimental Farm Apiary, where it was easily accessible to the bees. This experiment was continued during the season of 1902, with the addition of strawberries and raspberries. All fruit was placed in the same position as in the experiment of 1901.

On July 2, 1902, ripe fruit of four sorts of strawberries was tried in each place—the Williams, Clyde, Buback and Warfield—exposed in different places where it was easily accessible to the bees: *a*, Inside the bee-hive; *b*, On branches of trees in the apiary enclosure; *c*, On shelves in a workshop, to which bees had access through an open window. Every care was taken that all the fruit used in this experiment should be perfectly sound.

Fruit exposed inside the bee-hives. The fruit was exposed in three different conditions: 1, Whole fruit without any treatment; 2, Whole fruit that had been dipped in honey; 3, Fruit that had been punctured in different places with the blade of a pen-knife.

Four colonies were selected for the experiment, all of about equal strength. Each of these colonies was in a hive upon which was placed a super divided in the middle by a partition. In each one of the four hives the whole specimens, of fruit not dipped in honey, were placed within three empty frames, tied together as a rack; in the brood-chamber, the whole specimens of fruit dipped in honey were placed in one compartment of the super, and the punctured specimens were placed in the other. The bees began to work at once, both upon the dipped and the punctured fruit, and kept continually on it as long as any liquid could be obtained. They also clustered thickly on the whole sound fruit, but did not appear to be getting, or even trying to secure, any substance from the berries.

Fruit exposed on the shelves in a workshop the bees did not visit at all, nor on branches of the trees in the apiary; in the two latter places the fruit appeared to dry up and mold. In the hives all fruit decayed more quickly from the extra heat from the bees; this experiment was tried but one week.

July 29, experiment with four varieties of raspberries—the red, purple, very light-colored, and the black-caps. Each box contained some of each sort. They were placed in hives in exactly the same position as the strawberries. At this date there was considerable honey coming in. The bees did not touch any of the fruit in the hive, super, trees, nor in the house-apiary. On July 31, half of each sort of berries that were sound were cut in halves to see if they would attack the fruit, but they did not touch any of them. All the sorts in the hives decayed much sooner than the fruit exposed. That exposed to the air dried up considerably and molded.

A second test has been made with peaches, pears, plums, and grapes, with practically the same results. The bees actually starved where separated from fruit-juice only by the skin of the fruit.

John Fixter.

COMB FOUNDATION EXPERIMENTS.

Mr. Fixter also reported some experiments with foundation from the results of which he recommended hiving swarms on combs or full sheets of foundation. He also recommended alternating combs with foundation to get the latter drawn out.

Mr. Evans thought it not desirable to put foundation between combs in the super. The combs will be bulged, and the foundation will only be slightly drawn out. When you come to extracting you will have thin, tender combs which you can scarcely extract.

Morley Pettit—This will not happen if the foundation is alternated with frames of brood; but the best place to have combs built is in the super. The bees will there build the combs fast to the bottom-bar much better than in the brood-chamber. In order to avoid the bulging mentioned we have what we call a "foundation separator" to place between the comb and the foundation. This helps sustain the weight of the bees and relieves the foundation of that sagging influence, and causes them to build full, even combs.

Mr. Sibbald—I consider hiving swarms on combs a waste of combs—a bad thing; hiving on foundation is half bad; on starters is just right. We want all the combs we can get for the extracting-supers. Give a swarm a hive full of combs, and the queen will soon fill them with brood. Now, if you have a short honey-flow you have a lot of useless bees hatching out just at the close of the honey-flow. We don't mind drones—the workers will kill them off.

Other members were skeptical about the economy of the last statement.

Mr. Chrysler—If we hived swarms on combs for comb honey they would store honey below instead of in the sections, and then swarm.

Mr. Sibbald—The parent colony has good combs and a young queen. If you do not wish increase, the swarm can be returned at the close of the honey season, and the poor combs melted up.

Mr. Pettit—If the swarm is hived on about six starters, and the rest of the hive filled up with dummies, a large percentage of these starters will be built into good worker-combs. The rest make good extracting-combs, and are all the better for having been bred in once—they are stronger, and less liable to break in the extractor or in cold weather.

Mr. Sibbald—If I hived my swarms on six starters they would not stay.

Mr. Pettit—Very well, then; hive on a full set of starters, and in a couple of days remove what starters they have not begun work upon, and put dummies in their place.

Mr. Newton and others indorsed Mr. Pettit's view. but Mr. Sibbald did not consider this a "short cut."

Mr. Sparling—In a few weeks you can replace the dummies with combs.

Mr. Sibbald is not particularly anxious for worker-combs. These combs are tougher for having been bred in once.

Mr. Miller—They should be washed before using.

Mr. Dickenson—After the first extracting I can see no difference in them.

(Continued next week.)

Why Not Help a Little—both your neighbor bee-keepers and the old American Bee Journal—by sending to us the names and addresses of such as you may know do not now get this journal? We will be glad to send them sample copies, so that they may become acquainted with the paper, and subscribe for it, thus putting themselves in the line of success with bees. Perhaps you can get them to subscribe, send in their dollars, and secure for your trouble some of the premiums we are constantly offering as rewards, for such effort.

Contributed Articles.

No. 6—Improving the Race of Bees.

BY ADRIAN GETAZ.

(Concluded from page 534—1902.)

I WANT to begin with an apology. In a previous article I said that the West cages cost too much. Somehow or other, I had in my head an idea that the price is 25 cents apiece. I discovered since then that they are much cheaper.

Near the top of page 518 (1902), the compositor seems to have skipped a line. What I meant to say was: "Perhaps plenty of food and big cells go together, and we know that good queens and plenty of food do go together."

SOME CRITISISMS ANSWERED.

I wish to answer briefly some criticisms which have been made.

I am accused of being too dogmatic. That fault is more apparent than real. I used to write differently, but I was very often misunderstood, or something essential had escaped the attention of the readers and spoiled the contribution. This has led me to adopt a clear-cut, positive style of writing.

The "theories" concerning heredity, etc., that I have tried to condense in these contributions, are the conclusions reached by hundreds of scientists, eminent thinkers, stock-breeders, etc., during the past two or three centuries. As such, they are entitled to some consideration. To what extent I have succeeded in "condensing" is, of course, another question.

A critic not finding some things that he thought ought to be there, charitably (?) suggested that perhaps I did not know. The fact is I had to leave out a great many things in order to keep within the limits of space at my disposal.

I am also accused of ignoring the recent discoveries in beedom. I suppose reference is made here to the Gerstung and Dickel theories. In my opinion these theories (at least for the present) decidedly "lack confirmation."

To avoid misunderstanding, I should have stated that the drones reared in worker-cells cannot pass through the ordinary perforated-zinc.

INFLUENCE OF NURSE-BEES.

I said that the characteristics of nurse-bees, such as color, aptness to gather honey, etc., are not transmitted to the larvæ they feed. That statement has been challenged. The critic says that if corn is planted in a soil containing hyposulphite of magnesia, the young plant will bear blossoms quite different from that of corn.

The point is quite important as it has a bearing on queen-rearing. Suppose we have a Jersey calf. Does any one think that by feeding it with milk from a Shorthorn cow that the calf would acquire the color, disposition of taking fat, etc., of the Shorthorn stock? Not at all. And we may safely conclude that it is the same with bees, at least until positive proof of the contrary is given. There cannot be anything like hyposulphite of magnesia in the food given to the larval bees. That food is a mixture of honey, pollen, and secretions of the stomach-glands of the bees, the whole partially digested before being given to the larvæ. The composition of that food is practically invariable, so it matters not which race of bees we employ as nurses. But it matters very much whether enough of that food is given to our young queens or not, or whether they are well cared for or not. The three following conditions are therefore imperious:

1. Plenty of food—or rather raw material for same—nectar or feed.
2. A large number of nurse-bees to prepare the food and take care of the young queens.
3. A colony strong enough to keep up the temperature.

I want to insist on that last condition, as it is seldom noticed. It is necessary that the proper temperature should be kept up, not only during the larval stage of the young queens, but also until they are ready to emerge from the cells.

When the cells are capped the young queens are, after all, not much more than mere worms. The real development takes place while they are in the sealed cells. Unless the temperature is at the proper point, this development will not take place as it should. Cases are on record of queen-cells exposed to the cold hatching out queens with defective wings and legs, and very probably with defective interior organs, also.

QUEENLESS COLONIES VS. UPPER STORIES.

Both can be used, evidently. But in using an upper story, it must be remembered that the bees have then a full quota of brood to take care of in the lower story, and if the apiarist is not careful the upper story may be neglected.

I prefer a queenless colony, adding (by exchange) a comb or two of hatching brood from some other colony every few days. This process will keep up the strength of the colony especially in young bees, and, as there is but little brood to take care of, the young queens, even if they are numerous, will be well cared for.

NUCLEI VS. FULL COLONIES.

Somebody said as good queens as any have been reared in even small nuclei. I guess so. I also guess that worse queens than any have been reared that way, too.

I don't see why good queens could not be reared in nuclei, *if* the nuclei are not too weak, *if* the weather is warm enough, and *if* the honey-flow is good. But let the weather be cool, and a nucleus will not be able to keep the temperature up to the proper point. Let the honey-flow slack, and robber-bees set up business; then the whole force of the nucleus will be needed for the defense of the home, and the care of the young will be neglected.

(THIS IS NO JOKE.)

About a year ago now, I met a brother bee-keeper, Mr. X.

Mr. X. had just read something about artificial queen-rearing, and was quite enthuiastic about it. He gave me a glowing description of it.

Unfortunately, his memory was at fault on some points. He spoke all the time of transferring eggs instead of larvæ. As soon as I saw my chance, I asked him: "Brother X, you say they put the stick of cells and eggs in the gum. Now the cells are turned down. 'Pears to me that those eggs ought to fall off?"

Brother X looked very much embarassed, scratched his head once or twice, and all at once brightened up and said: "Oh! They just put a little bit of thick honey in the cells, and the eggs stick to it!" Knox Co., Tenn.

Experience with Forced Swarming.

BY J. T. HAIRSTON.

I HAVE had considerable experience with forced swarms. I wish to say there is no difference between them and natural swarms, if rightly made. What applies to one applies to the other, and practically there is nothing new in them. Transferring by drumming is identically the same.

As to forcing before or after cells are started, it doesn't make any difference; only if the apiarist has as many colonies as he wishes, he should force only those that have cells started, as they would swarm anyway.

I have found by experience that giving a frame of brood does no good, but harm. I tried giving brood until I found the bees would stay far better without brood; and as to giving honey, after the swarm has become established it is all right, provided the bees are not gathering any honey; otherwise it is useless.

If the colony is run for extracted honey it doesn't matter whether the bees are hived on drawn combs; if run for comb honey, hive on ½-inch starters, or full sheets of foundation, but *never* on *wide* starters.

If hived on starters, after the queen begins to lay, three frames should be removed, and space filled with dummies; and after the five frames are filled with full sheets or drawn combs. The super should be put on the hive when the swarm is hived, partly filled with "baits," with a honey-board on.

If the swarm has plenty of room, ventilation, and shade, until it has become established in its new home, it is not likely to abscond. But I have found that if a frame of brood is given it begins, unually, to construct cells preparatory to swarming.

If, as I previously stated, a forced swarm is rightly made it is not likely to desert its hive. The bees should be made to fill themselves with honey, and be treated like a natural swarm.

Forced swarming is a boon to the specialist with out-yards, as he can handle his bees with less help, as one day in the week is all the time needed for each yard. He can examine each strong colony, and all that are preparing to swarm can be shaken, and there's no watching for swarms.

Cherokee Nation, Ind. Ter., Dec. 29.

The "Missing Link" in Rearing Queen-Bees.

BY DR. E. GALLUP.

SOME forty years ago, when I first moved to Iowa, I saw the largest and strongest colony of bees that I had ever seen, up to that date. They were in a hollow basswood log, and the queen was the largest, by nearly one-third, that I had ever seen. The log contained as much comb as four 10-frame Langstroth hives, and all was worker-comb. Here was where I first saw the "missing link," and the largest queen-cells that I had ever seen.

That fall I saw, at Decorah, another large colony in a dry-goods box, and another extra-large queen. It seems the owner had four large swarms to cluster together, and, not knowing how to divide them, had hived them all together, and they had built all worker-comb.

The following spring I found another extra-large colony in a hollow butternut-tree, and when I transferred them they had another of those extra-large queens and all the comb was worker-comb. Previous to this, in Wisconsin, I took an extra-large colony out of a small house four feet square, by six feet tall, built on purpose, and stocked by setting a common box-hive on sticks at the top of the house without a bottom-board, consequently the bees had extended their comb down and outside the hive, and all was built worker-comb. I studied long and seriously on the question of *why* those extra-large colonies and extra-large queens. I reasoned that the queen must be extra-prolific, and the bees must be longer-lived, or they could not keep so populous winter and summer, year in and year out.

Therefore I built my large hives to test the question, and other questions that puzzled my mind. I filled those hives with all worker-comb, and after superseding the first queens I had extra-large queens, and long-lived ones, and long-lived workers as well, and I demonstrated to my own satisfaction that bees reared queens to suit the capacity of the hive, to a certain extent. Remember that I was not ridiculed into this idea, and I don't think it very likely that I shall be ridiculed out of it in a hurry.

On page 696, E. F. Atwater says: "Now the larger part of our bees are run for extracted honey, with little or no swarming." A little farther on he says: "How shall we explain the fact that the Dadants have so little swarming with their large hives?" Simply because they run for extracted honey, and manage purposely to prevent swarming, as they have informed you in back numbers of the American Bee Journal. Further on, he says: "Astonishing to say, when given the opportunity, they respond nobly, with 10, 12 or 15 frames of brood." Well, who said they would not? But will they keep it up for 5 or 6 years? That is the "question before the house."

I wrote an article for publication, a number of years ago, and asked this question: If one or more colonies in an apiary produce twice as much honey, and twice the number of bees, of the balance of the hives, in the same apiary, why can not we rear queens and bring the balance, approximately, up to that standard? We *certainly* can. "If not, why not?" If one or more queens will lay eggs right up to the full capacity, for 5 or 6 years—and even then examine them as closely as we may, we cannot see any diminution of the number of bees in the colony, when the bees supersede her—can we not rear other queens equally as good? "If not, why not?"

If we can rear 10 percent of our queens good, and 90 percent poor, why not rear 90 percent good, and only 10 percent poor? If the bees in one colony live to be 90 days old in working season, and another colony lives to be only 50 or 40 days old at the same time, and in the same apiary, what is the cause of the difference? If we rear our queens in small nuclei, and they cease their prolificness at the age of from one month to one or two years, and they are small and inferior in size when compared with those reared in extra-large and populous colonies, and those reared in the nuclei lack the missing link, while those reared in the populous colonies have that appendage, what is the cause? Of course, I mean under the swarming impulse.

Now, Mr. Atwater, you have the same privilege of learning that I did; I studied and answered all those questions, and more, long and seriously, and I may say intensely, and I answered them satisfactorily, at least to myself. Do not theorize as many do, but confine yourself to actual facts. Theory is not practice. As I have never reared queens for sale, and never expect to do so, no one can accuse me of seeking a free advertisement of my queens.

Remember, at my age it is quite a task to sit down and write an article for publication, and go into all the minute details, all the whys and wherefores, so that the merest novice in bee-keeping can comprehend what is meant, perfectly and undertandingly.

Soon after I learned to drum out, and make artificial swarms, by Mr. Wellhausen, in Wisconsin, bee-keepers sent for me far and near to divide their colonies. We knew nothing of movable-comb hives them. Well, I worked at it more or less for two seasons, and in the meantime I divided my own bees, instead of waiting for them to swarm naturally, and I began to notice that the old colony that was compelled to rear a queen did not appear to do as well as they ought. Many of them became queenless, etc. This puzzled me. I studied long and seriously over it, but did not find any solution to the question. When I divided nearly 100 colonies and found dead queens in front of the hives, and some queens crawl out of the hives, and crawl off when only four weeks old, I was puzzled still more. I had begun to use movable-comb hives; then I had no such trouble when my bees swarmed naturally.

When I found the first missing link I cut out all extra cells, to prevent swarming; I examined every cell, but found no missing link in a single cell. Then I began to think I was mistaken, and never had seen a missing link. But I finally stumbled onto one in a naturally-built cell; then I soon discovered that I could find them every time when dissecting natural cells, built at swarming-time, or when superseding. If was a very easy matter then to come to the conclusion that they were placed there by Nature for a purpose, Mr. Alley to the contrary notwithstanding. The reader will please notice that Mr. Alley tries to ignore or deny that it is any benefit whatever. But Nature makes no useless mistakes of that or a similar kind. His argument will not even hold water.

Orange Co., Calif.

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

"I Don't Know"—Probably Counted All.

MR. EDITOR:—Do you think Mr. Hasty meant anything wicked by what he said about the donkeys on that title page? How many do you think he counted?

Honey for Putting Up Fruit.

Honey used in caramels is delicious, and in some kinds of cookies and cakes I think it better than sugar. Now, the question is, Can fruit be put up with honey successfully? and is it as good as sugar? Have any of the sisters tried putting up fruit with honey? If so, what kinds of fruit have you put up? How much honey did you use? What kind of honey did you use? What was the result? Please tell us all about it.

Shade-Boards vs. Living Shade.

On page 9, Mr. Hasty says: "Mr. W. R. Ansell is right to the extent that a good and sufficient shade-board is a little ahead of any practicable living shade. May play truant, and be absent when needed most, which the latter does not do. Page 728."

Now, my bee-keeping sisters, let the men-folks work in the broiling sun if they want to, but don't you be misled by any such sophistry. Those shade-boards may do as well for the bees as living shade, but how about *you?* If I had to work with bees on an open plain without any shade, I don't think I would work with them long. For one thing, the men don't care for their complexions; we do. If you have out-apiaries, and those shade-boards have to be placed on the ground when a storm approaches, or there is danger of their blowing away, then I think they will do exactly what Mr. Hasty says they won't do—"play truant."

A serious objection to shade-boards, aside from their not shading the bee-keeper, is the fact that they have to be taken down and put up again every time a colony is overhauled. That would take both time and strength.

My ideal would be to have, if possible, living shade for the bee-keeper, and where that can not be had the next best thing is to have a movable shade. This I have greatly enjoyed.

So far as the bees are concerned, if they can not have living shade, the right thing is a double cover of thin material. Even if there is living shade, such a cover is a desirable thing, for the dead-air space makes it cool for summer and warm for winter.

Remedy for Hoarseness.

The juice of a lemon, half an ounce of glycerine, half an ounce of honey, is an excellent remedy for hoarseness, and is easily prepared. Take a teaspoonful every few hours.

Wetting Brittle Sections for Folding.

If you have sections that you have kept over from last year without making up, and they have become dry and brittle, breaking badly when bent, try pouring a little boiling water in the V-grooves, but be careful not to get the water on the dovetailed ends of the sections, else you may have trouble in putting them together. The sections usually come 500 in a crate, and you can wet the whole 500 at one time. You would better take out a few of each layer, then wedge them up tight before wetting. If you don't take any out, they will swell after they are wet, and will be wedged in so tightly that you will have trouble in getting them out.

To take them out easily before wetting, turn the crate on its side, then the ones that are left will not tumble when some are taken out.

If you take a funnel and put in a plug whittled down to a sharp point at the lower edge, leaving room for only a small stream of water to pass through, and hold the funnel directly over the grooves, pour the hot water into the funnel and move quickly along the line of grooves, you will find it works well. A small tea-kettle about half full of boiling water makes it easier to manipulate without spilling the water where you don't want it to go. Be sure the water passes clear through to the other side of the crate, so that all the sections will be wet.

Some advise putting sections in a damp cellar before using, but I believe the hot water is better.

You may think it a little early to talk about making up sections, and perhaps it is, but it is better to be too early than too late, and really they can be made up any time during the winter whenever you find time for it.

Husking-Bees.

Miss Rural—And were you never in the country during the season for husking-bees, Mr. Sappy?

Mr. Sappy—No. The idea! How do you husk a bee, anyway?—Philadelphia Press.

The Buffalo Convention Report is issued in pamphlet form, size 6x8½ inches, 80 pages and cover. Besides a full report of the proceedings of the 32d convention of the National Bee-Keepers' Association, held in Buffalo, N. Y., Sept. 10, 11 and 12, 1901, it contains fine half-tone portraits of all the officers and directors of the Association; also the Constitution, a list of the membership up to the end of 1901, and the two latest bee-songs—"The Hum of the Bees in the Apple-Tree Bloom" and "Buckwheat Cakes and Honey." We believe it is the finest ever gotten out for the Association. Of course, all members of the Association receive a copy free, but there are thousands of our readers who are not yet members, but who should have this valuable Report. Better send for a copy, if you have not yet received one. Price, postpaid, 25 cents, or with the American Bee Journal one year—both for $1.10. Send all orders to the office of the American Bee Journal. Better order soon, before all are gone.

The Premiums offered this week are well worth working for. Look at them.

✻ The Afterthought. ✻

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, O.

JOINING "THE GREAT MAJORITY."

I am so got up, somehow or other, that I cannot see a statement which involves a false idea without a certain measure of distress. Am I unusual in that, or are there lots of other folks affected that way? And is it a good way to be got up, or is it a misfortune? On page 773 it is said that the rest of us will soon be called to join "the great majority." This figure of speech is accepted by nearly everybody. If we think of the whole world, and all time, the expression is in accord with facts; but we don't carry the whole world in our thoughts. We are thinking about the present races in our own country, that *our* dead are much more numerous than our living. Believing this implicitly, I once (for what reason I cannot imagine) started in at a little study and figuring to answer the question, *When* did our dead become a permanent majority? The result astonished me; perhaps it will astonish those who read this—they can easily verify the figures. Our living are 76,000,000; our dead have not nearly attained that figure yet. The next discovery was also surprising in its way. The dead *never will be* a majority till the present rate of increase stops. Take our total population at successive periods, not too far apart, and (Be careful there, not to kill the same person twice!) divide the great flocks into dead and living—the earlier ones of course all dead. Or apply a reasonable death-rate per thousand to the figures of each successive census.

PUTTING IN FOUNDATION WITH A SCREW-DRIVER.

And so Mr. Abbott still puts in foundation with a screw-driver. I don't know what we are going to do about it. As long as the foundation goes in—goes in as well and as rapidly as he cares to have it, 'spects we'll have to submit. Even if he picks cherries with his mouth instead of his hands, he must be the boss. Page 773.

THE BEST MANAGEMENT.

"He who can so manage as to exchange all surplus bees grown during the season, for honey, and come out with the same number of colonies he started out with, has solved the problem best."—F. Greiner, page 776.

Just so. In religion folks oft think they *have* the graces because they can tell about them in words; but in bee-culture I don't think many will make a similar mistake about the above. Good to have the things in words, and to repeat the words o'er and o'er; but though we watch, though we fight, possibly though we also pray, most of us are going to fall short. Those words occur in a meaty article. The *experiences* that shaken swarms sometimes abscond even when brood is given them, and that once a shaken swarm managed to come to nothing with an entrance-guard on—these experiences are valuable, lest we run too much to theory on current fads.

BEAUTY AND GOODNESS A SPAN.

I don't know but it's time to say once again the little word that there is to be said on the other side—have heard so *very often* the manifest truth that beauty in bees is not what we want. Sure, and it is'nt—but jist listen: The scrub cow has no beauty. and her milk is blue. The Jersey is delicately beautiful, and her milk is surprisingly rich. Beauty is not what is wanted in this case; but somehow the beauty and rich milk are pretty sure to be found in span. Same of the nice-looking Holstein. Her looks are an outward and visible sign that she can lick the scrub out of her boots in the number of gallons. 'Spect it's rather the rule than the exception that a valuable quality has some look—*usually a nice look*—that sticks closely to it. But this is no excuse for the scandal of selling mere prettiness when nobody knows or cares what the honey-qualities are. Page 776.

THE "LAYING HABIT" OF QUEENS.

And isn't W. J. Stahmann *away off* in thinking that limited laying for the first week or two is going to do anything to make a young queen unprolific? Reasonable that laying habits running the whole first season might persist through life, *providing it's so*. And, in good sooth, the other, in case it's so, is much more important for us than if it looked reasonable. Reasonableness can probably be found later on, if the fact is assuredly just as claimed. Is a queen like a rocket? A rocket held down for a very short time is going to fly lower on account of it. Page 776.

EMPTYING HALF-FILLED SECTIONS.

The experience of Edwin Bevins is that with a super bottomed with burlap in such a way that the bees can only get through a hole at one end, they empty half-filled sections pretty promptly. Wonder how often this will fail. Suspect that *sometimes* a weak colony will vote that the chamber is a little cool, and they can just as well bring down the honey some other day. Page 781.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

Sweet Clover.

1. How many pounds of sweet clover seed does it take to sow an acre?

2. Will it grow on new land very roughly plowed?

3. Which is the better honey-producer, the white or the yellow? MICHIGAN.

ANSWERS.—1. Sow the same amount of seed that is generally sown of red clover in your neighborhood. Half as much will do if seed is scarce and land plenty. But if you want sweet clover to bloom every year on the same land, you must sow two years in succession, for it is a biennial.

2. Yes, and it will grow on land not plowed at all, if the seed be tramped in by stock.

3. I don't know. Some claim that yellow is better than the white, but the white is better known. It would be a good plan to try both.

Shaken Swarms and Other Old Ideas.

How new that shaken swarm idea is! C. J. H. Gravenhorst gave it more than 30 years ago. Then read J. H. Nellis' catalogs, and the half-Langstroth frames and half-cases way back in the seventies; also in The Exchange. The Gravenhorst swept swarms is an old and well-tried satisfactory practice. I have known of its use 26 or 28 years. Mr. Heddon got lots of his work from the Nellis half-cases.

The old-timers are not all dead yet. Some remember the past use. CONNECTICUT.

ANSWER.—Yes, forced or shaken swarms are much older than many suppose. The plan is so much in accord with natural swarming, being merely a way of anticipating it, that it is quite the natural thing that one should think of operating by it, and so it comes to pass that probably a good many in different quarters conceived of it independently of each other.

Some Cross Italian Bees.

My bees needed shaking this year, they did not swarm or work, either. I bought 6 colonies in box-hives last winter, and transferred them to Heddon hives. They were blacks, and tartars at that, and I had a job, too. I thought from all I had read that if I put in Italian queens their brood would be gentle, but I was mistaken. They are as pretty as can be, but are just as cross as the blacks were. I dare not take a friend in the garden where they are, as they dispute possession, every time. Why is this?

SOUTH CAROLINA.

ANSWER.—Italians as a whole are gentler than blacks, yet they are not all alike, and sometimes a colony of Italians is anything but remarkable for good-nature. It may be that you have been unfortunate in getting a colony exceptionally cross. It is also possible that another season you may find them more gentle. The past season was in your locality one to give cause for ill-nature in almost any colony —cool nights with heavy dews and little storing.

Oregon and Washington for Bee-keeping.

Please give what information you can about Oregon and Washington in regard to apiculture. What is the main source for honey? How does that country compare with Minnesota for bees? What about climate and soil?

MINNESOTA.

ANSWER.—These questions are too much for me, and I am not sure just where is the best place to apply for information—possibly by addressing Hon: James Wilson, Secretary of Agriculture, Washington, D. C.

When to Transfer Bees.

I began the bee-business about four months ago. I bought 33 colonies of bees, and find the ones in large hives in better shape than those in the small hives. I have taken as high as 40 pounds of white honey from one hive, and only cut off the hive 6 or 8 inches to put on a super in the spring. I have about 12 colonies to transfer. When would be the best time to transfer them? TENNESSEE.

ANSWER.—The usual time for transferring is in fruit-bloom, although there is an increasing disposition to defer it till three weeks after the casting of a prime swarm.

Were They Prime Swarms.

I had a swarm of bees issue from the parent hive July 13, and hived them on 10 drawn combs, on the old stand, moving the hive from which they swarmed some distance. On July 14 they swarmed out of the hive; I put them in again, and then took a comb of unsealed larvæ and put in the hive, and put them back again. This time they stayed and went to building queen-cells. I tore the queen-cells down, and they built them up again, and on August 4 they swarmed again with the old queen clipped. Were they both prime swarms? NEBRASKA.

ANSWER.—I don't know. A swarm issuing with a laying queen is usually entitled to the name of "prime swarm," and when such a swarm sends out a swarm the same season, the latter is called a virgin swarm. It looks as if there was something abnormal in the case you mention, the second issue being by dissatisfaction of the bees with their queen, and I don't know enough to say positively as to the proper nomenclature.

Extracting Honey—Comb vs. Extracted.

I see in a catalog that the Cowan Extractor, No. 15, is made for the Langstroth frame, of which the top-bar is 17⅝ inches long, 9⅛ inches deep.

1. Can I extract a frame that is not so long?

2. Or from frames not so deep as the Langstroth?

3. Is there more profit in producing extracted than comb honey? OREGON.

ANSWERS.—1 and 2. Yes, a shorter or shallower frame can be extracted in such an extractor all right.

3. I don't know. In some places one kind, in other places the other kind is the more profitable. The kind of honey may have something to do with it. The man may have a good deal to do with it. There are many bee-keepers who work for extracted honey exclusively, and they probably think that under all the circumstances there is more profit in that kind of honey for them. The same may be said of comb honey. It is possible that no man living can tell which would be better for you without actually trying the two side by side.

Average Income per Colony—Book for Amateurs—Worms in Colonies.

Upon your reply to the following question will depend whether I follow bee-culture as a business, or for pleasure:

1. What is the enclosed sage? Is it a honey-producer?

2. I am situated about 900 feet above valley level, out of the frost-line; within 2 miles, in either direction, are about 1000 acres of enclosed sage, 100 acres orchard (prune and apricot), 3 acres eucalyptus, and large quantities of flowers. How many colonies of bees will they support, there being no bees in any quantity in the neighborhood?

3. What should be the average income per colony?

4. I have "Bee-Keeping for Beginners," by Dr. Brown, and the "Cook's Manual." Would you suggest any other book for an amateur?

5. I have purchased 5 colonies of black bees containing about as many worms as bees. What will I do with them?

CALIFORNIA.

ANSWERS.—1. [The enclosed plant is a Fleabane, but too dry and withered to determine the species. It belongs to the Composite family.—C. L. WALTON.]

2 and 3. I don't know. Questions like these are exceedingly difficult to answer. Indeed they have no exact answer. If you should ask me the average yield per colony in my location for the past five years, I might tell you exactly; but if you ask about the next year or the next five years, I must say I don't know. It may be very much more or very much less. If you can get some one situated as you are to tell you what his results in the past have been, it will give you some data on which to base a guess. Sorry I cannot give you any more satisfactory answer.

4. "Dadant's Langstroth" and Root's "A B C of Bee-Culture" are both worthy of the highest commendation.

5. Go through all the colonies and dig out at least the worst cases. Wherever you see a web of the wax-worm, dig it out. Take a wire-nail, dig open one end of the gallery, then start at the other end and tear it open till you have opened the whole length. That will generally dislodge the worm, which you will dispatch. Do all you can to keep the colonies strong, and as little as possible to weaken them. Weak colonies are the ones that succumb to worms. As soon as you can, Italianize. With strong colonies of Italians you will not need to pay any attention to worms.

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FROM MANY FIELDS

Smoker-Fuel—Wintering Well.

The smoker-fuel question I have watched with a vigilant eye, but I have not seen the kind mentioned that I use. I do not know its real name, but I call it "stump smoke." It grows on the side of old, decayed stumps in the woods. Find it when it is dry; if you gather it then, you will find it the very best fuel for smokers there is. One smoker-full will last and burn from 4 to 9 hours. Try it and report.

Bees are wintering well at this date.

R. J. CARY.

Fairfield Co., Conn., Dec. 29.

Trying Year in Texas.

This year has been a trying time on farmers and bee-keepers. I have 186 colonies of bees, and they went into winter quarters in fine shape. I still live in hopes, if I die in despair. We have had an abundance of rain which brought up the mint crop, and if we have the right season in 1903 we will surely be in the fight on honey.

F. J. R. DAVENPORT.

Ellis Co., Texas, Dec. 26.

Catnip as a Honey-Plant.

I think catnip is one of the best honey-producing plants we have, as it produced some forage for our bees about six months the past season. Where I found it growing the thriftiest, was in an old abandoned quarry, where the sun beats in very warm. There was about two acres of it.

ARTHUR STANLEY.

Lee Co., Ill.

[We can supply catnip seed at 20 cents an ounce, postpaid.—EDITOR.]

Paraffin in Bottom of Shipping-Cases.

I have found the use of waxed-paper in the preparation of no-drip cases a little troublesome. I have to send away for it, moreover. Hence the necessity for inventing some other contrivance. It occured to me that the joinings between the bottom-board and the side and end, and those at the angles for an inch up, might readily be made water-tight by the use of paraffin. I tried the experiment just now. With a small iron plane I made some paraffin shavings. These I put in an empty tin box, that had been used for holding belladona plaster, and melted. I then poured a small quantity of this liquefied paraffin into one corner of a case, and by tilting it as required (the case, I mean,) I caused the paraffin to flow all around in the angles at the four corners. This scheme worked very

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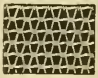

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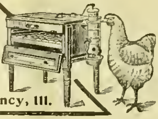

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nicely, indeed. All that now seems necessary to perfect the arrangement will be to put some excelsior in the bottom of the crate on which rests the cases. I leave the plan with you to speak for itself, free from any restriction as to whatever use you see to make of it.

At preserving-time, I find the plane a convenient instrument for making the paraffin shavings, which my wife uses by putting them in the jelly tumblers and before she pours in the hot jelly or fruit.

DR. W. O. EASTWOOD.
Ontario, Canada, Dec. 19.

Prefers 10-Frame Hives.

I started last spring with 19 colonies, and increased to 37, which I have in the cellar, having put them there Nov. 26, in good shape. My honey crop was light; I had only 180 pounds of section honey, which I run for altogether. I look for a good honey crop next season. I never saw as much white clover as there is now.

As to the hives that suit me. I prefer the "Wisconsin" to all others. I bought 11 Danzenbaker and 5 Wisconsin last spring, and find I like the Wisconsin the better; the Danzenbaker is too shallow. I found that my bees swarmed twice as much in 8-frame hives as they did in 10-frame. I will not use any but 10-frame hives in the future.

As to wintering bees in the cellar, I had such good luck last winter that I am trying it again. I put a ventilator 9 by 13 inches in it, so I can ventilate it to suit me.

E. B. PRITCHETT.
Warren Co., Iowa, Jan 5.

An Old Subscriber.

I commenced in the days of Wagner, and have taken the American Bee Journal about all the time since, and am now over 80 years old. It is much better today than it has ever been before. Long may it live.

J. W. ROBINSON.
Columbia Co., Wis., Dec. 2.

Queen-Rearing.

They say that in a multitude of counsellors there is safety, but I tell you that as far as queen-rearing is concerned, Gallup, Alley, Doolittle, etc., have got me where I hardly know where I am at. I rear queens only for my own use, but I want the best that can be reared. I have tried nearly all the methods given, with varying results, during the last few years, and have thought that I had settled down to the best way to rear queens, but now comes a host of old veterans (as witness the last volume of the American Bee Journal) and almost quarrel over the way queens should be reared. So you see where it places us ordinary mortals, who just begin to think we know something. But let them come, and while you are about it, let W. H. Laws finish what he promised us on page 598 of the American Bee Journal for 1902.

Yours for further enlightenment,
L. L. TRAVIS.
Wyoming Co., Pa., Dec. 30.

[All right, there are no laws, as far as we know, against Mr. Laws finishing the queen-rearing story he began. He can send on more of it any time he finds time to write it out.—EDITOR.]

Didn't Get Any Honey.

This is the first year since I commenced to keep bees that I did not get any honey—not one pound from 45 colonies; but everything looks favorable for next year. 1901 was too dry, and 1902 too wet, but I got 800 pounds in 1901.

JOHN A. BLOCHER.
McLean Co., Ill., Dec. 27.

Swarming—Light Honey-Yield.

Although 85 years old next month, I still keep a few colonies of bees, not for the profit but for pleasure and pastime. I live in the city and have not room for more than 30 or 40 colonies. I run them for comb honey. I control swarming by destroying the queen-cells; if they should swarm, I always save them. I have not had a swarm abscond for 15 years. I watch them closely, and as soon as they are all out I open the old hive and take out a frame of brood, place it in a new hive with frames and starters, and put it near where they are about to alight. Quite often they go in without alighting; if not, shake a few of them in front of the hive. As soon as they are in the hive move it slowly to the place where it is to remain for the season. The scouts come back and find the swarm gone, fly around until discouraged, and go back to the old home. In about 3 days I put on a super with sections and foundation.

The past season was very light in the honey-yield. I had 22 colonies, spring count, got an average of 40 pounds per colony, and sold it at home at 15 cents for full pound sections.

I cannot do without the "old reliable" American Bee Journal. JOHN CLINE.

Lafayette Co., Wis., Dec. 31.

BEEDOM BOILED DOWN

Forced Swarm from Two Colonies.

The following plan, given by J. E. Crane, in Gleanings in Bee-Culture, will suit some who want to increase:

> Some place their bees out in the spring in pairs, two colonies close together; and when the swarming season arrives one of these colonies is shaken into a new hive, while the other is removed to a new location, and given the brood-combs from the one from which the bees have been shaken. Thus, one new colony receives all the bees from one old one, and all the mature bees of the other with surplus boxes, etc.

A little later, however, the colony having the double allowance of brood will need another shaking to prevent swarming. Here is the plan given by L. Stachelhausen, in the same paper:

> These artificial swarms can be used in different combinations. For instance, to prevent swarming in out-apiaries I use the following management, which Doolittle recommended some years ago: The strongest colonies are brushed or shaken on starters on the old stand. The brood-combs and a queen from a nucleus in a Miller cage, closed with candy, are set on the place of another strong colony, and this is set on a new stand. In this way swarming is prevented in too strong colonies.
>
> For comb honey we need very strong colonies, so we can shake all the bees from two strong colonies into one hive, and set this swarm on the stand from which it received the queen. The brood-combs of both colonies are set on the stand of the other colony, without the queen. With the queen, if she is a good one, and one or two brood-combs, we can form a nucleus. Ten days later this colony is brushed off, and the old or a young queen introduced. So we have two strong colonies which can be used for comb-honey production, and a number of combs containing capped brood, which can be used for quickly strengthening nuclei or other weak colonies.

Bacillus Alvei and Mesentericus.

Are they the same? Dr. Lambotte thinks he has proven that they are; our "Afterthinker" is skeptical; Adrian Getaz also demurs. In the American Bee-Keeper, besides giving reasons for some doubt, he gives so succinctly the reasons for Dr. Lambotte's belief that it is worth while to quote at length, as follows:

> The bacillus mesentericus is not always, and, in fact, not often met in decomposed and

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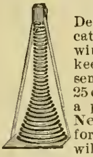

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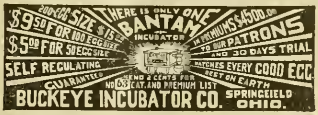

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We can furnish these jars, f.o.b. Chicago, at these prices: One gross, $5.00; two gross, $4.7 a gross; five or more gross $4.50 per gross.
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putrefying substances. Wet bread and cold cream are the substances on which it is usually seen. The numerous germs which are always present in the air, and so rapidly decompose dead substances, belong nearly all to another order of beings.

Briefly, the arguments presented by Dr. Lambotte are these:

1. The bacillus mesentericus and bacillus alvei have the same shape, the same size, and present the same arrangement when cultivated.
2. Both bacilli produce (out of the matter in which they live) a ropy, glue-like substance.
3. Both have the same effect on the serum of the blood, when injected in the veins of an animal. This last consideration is presented by Prof. Lambotte as conclusive.
4. A "culture" of bacillus mesentericus was spread over some brood to give them the disease. The larvæ were killed, but after three days the bees had cleaned them out, and no further damage was observed. This experience was repeated a number of times with invariably the same result.

Prof. Lambotte then tried another plan. He took a number of larvæ, ground them, and made a "culture" with it. In this culture he introduced some bacilli mesentericus—repeated the operation on the same set several times, so as to get them used to that kind of food. These are not the terms that he used, but it is the meaning. Then he applied the culture to a comb of brood. The result was, that about one-fifth of the larvæ were diseased, and the remainder had been cleaned out by the bees, when examined.

Well, as Dr. Miller says sometimes, "I don't know," but, judging by Dr. Lambotte's own report, I should rather think he is wrong.

As to this first item, I may say that the two bacilli, though apparently identical, may yet be different. Bacilli are very small things, and only their general size and shape can be ascertained under the microscope. It is very much like looking at two men at a distance of a quarter of a mile with our natural eyes. Their general size and shape can be seen, but all the details of the face, hands, etc., escape our sight entirely.

As to the second point, while the products obtained are in both cases ropy, glue-like, and of about the same consistency and color, they may yet not be identical. And if they were it would not be impossible that two dif-

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Forty Years Among the Bees

By DR. C. C. MILLER.

DR. C. C. MILLER.

The above is the title, and name of the author, of a new bee-book which will be ready early in February, 1903, as it is now in the hands of the printers. It is a book that every bee-keeper in the world that can read English will want to own and read. It will contain over 300 pages, be bound in handsome cloth, printed on good book-paper, and illustrated with over 100 beautiful original half-tone pictures, taken by Dr. Miller himself. The book will show in detail how Dr. Miller does things with bees.

The first few pages of the new book are devoted to an interesting biographical sketch of Dr. Miller, which finally tells how he happened to get into bee-keeping. Seventeen years ago he wrote a small book, called, "A Year Among the Bees," but that little work has been out of print for a number of years. While some of the matter used in the former book is found in the new one, it all reads like a good new story of successful bee-keeping by one of the masters.

How to Get a copy of Dr. Miller's "Forty Years Among the Bees."

The price of this new book is $1.00, postpaid; or, if taken with the WEEKLY **American Bee Journal** for one year, BOTH will be sent for $1.75.

Or, any present regular subscriber to the American Bee Journal whose subscription is paid in advance, can have a copy of Dr. Miller's new book *free as a premium* for sending us **Two New Subscribers** to the Bee Journal for one year with $2.00. This is a magnificent offer. Better send in the new subscriptions before Jan. 1, so they can begin with the new year. Or, if sent at once, we will throw in the rest of this year's numbers of the Bee Journal free to the new subscribers.

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$10.50 One-Horse Corn, Bean and Garden Seeder. Drops in hills and drills 12 acres a day. 50c for Triumph Corn planter. 80c Crank Seeder, Sows wheat, oats and grass seed 4 to 10 acres an hour. Five other styles. Send for catalogue.

Send for Our Catalogue It has 432 pages, size 9x11 inches. Postage is 15c, but if you will cut this ad out and send it to us we will mail the catalog FREE. **MARVIN SMITH CO.,** 55-57-59 N. Jefferson St., CHICAGO, ILL.

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ferent bacilli could produce the same substance.

The fourth item seems to me a clincher against the Professor. A culture of bacillus alvei from a diseased colony applied to sound brood, as the Professor did, would have, in each and every instance, developed a raging case of foul brood, while the application of a culture of bacillus mesentericus failed to produce any disease. However, I do not want to be too dogmatic. The Professor says that some of his attempts at introducing the bacillus alvei also failed.

The fifth item is not very conclusive. One-fifth of the larvæ got sick, and very sick at that, and their sickness was almost, if not altogether, like foul brood. Still, it might not have been foul brood. We might prepare a concoction of putrid meat, "embalmed beef," or such things like that, which, when eaten, might produce a sickness very much like cholera morbus, and yet it would not be a case of cholera morbus.

If that fifth of the larvæ which got sick were really a case of foul brood, the whole colony would become diseased entirely in the course of a few months. Unfortunately nothing is said on that point.

In view of this failure to develop foul brood by inoculating cultures of bacillus mesentericus, it may seem strange that Prof. Lambotte still insists that it is the same bacillus which produces foul brood. He claims, however, that the spores are probably always present, and only develop when the conditions are favorable, that is, lack of proper food, too much dampness, etc.

Those who know how rapidly foul brood spreads throughout a whole apiary even when the colonies are in the very best condition, are not likely to accept such an explanation.

Rules for Making Forced Swarms.

1. Don't brush unless it is very strong.
2. Don't brush unless there is a good flow, or to control the swarming fever, as perhaps you will have to do at times.
3. Be sure that the bees gorge themselves with honey.
4. If you don't leave a few old bees in the old hive you must not shake out the thin unsealed honey, for the young bees use it as a substitute for water, and, of course, the force left will all be needed to nurse the brood.
5. If you use any drawn comb in the supers, and none in the brood-chambers, you will catch some pollen. Unless an excluder is used, the queen will go above and lay in the sections that contain drawn comb.
6. Don't use an excluder if you can avoid it, as it tends to discourage the bees from promptly entering the supers.
7. Have your hive level and shaded.
8. Be sure to reinforce the swarm with another drive from the old hive within seven days.—J. E. CHAMBERS, in Gleanings in Bee-Culture.

CONVENTION NOTICES.

Wisconsin.—The Wisconsin State Bee-Keepers' Association will meet Feb. 4 and 5, in Madison, Wis. Special program prepared. Excursion railroad rates and special hotel rates secured. N. E. FRANCE, Pres.

New York.—The annual meeting of the Oswego County Bee-Keepers' Association will be held at Fulton, N. Y., Saturday, March 7, 1903. Prof. Frank Benton will be present and address the meeting. An interesting program is being prepared, and all persons interested in bees are cordially invited to be present.

MORTIMER STEVENS, Pres.
CHAS. B. ALLEN, Sec.

Michigan.—The Michigan State Bee-Keepers' Association will hold its annual convention Feb. 3 and 4, 1903, in the Council Rooms of the City Hall, at Lansing. The rooms are in the third story, back away from the noise of the street, yet they can be reached by the elevator.

Arrangements have been made at a nice, clean hotel, the Wentworth House, only two blocks from the place of meeting, where bee-keepers will be accommodated at $1.50 a day.

The Michigan State Dairymen will hold their convention at the Agricultural College, Lansing, on the same dates, as also will the State Veterinaries, thus enabling the members of all three societies to come at reduced rates. When buying your ticket you will pay full fare, and ask for a certificate "on account of Michigan Dairymen's Convention," as the secretary of this convention is to sign the certificates for all three of the conventions. This certificate will enable you to go back at one-third fare.

The first session will be on the evening of the 3rd, when E. R. Root will show us "Bee-Keeping from the Atlantic to the Pacific, as seen through the Camera and Stereopticon." This will consist of portraits of distinguished bee-keepers, of apiaries, hives, implements, methods, etc., all fully explained. A more enjoyable entertainment for a bee-keeper can not be imagined.

Mr. C. A. Huff, who has been experimenting the past season with formalin for curing foul brood, has promised to be present. Messrs. Soper and Aspinwall are not far away, and will probably be present. Mr. Aspinwall has kept about 70 colonies for the past 10 years, without losing a colony in winter. He can tell us how he has prevented this loss; also how he prevents swarming. Mr. T. F. Bingham, who has been so successful wintering bees in a cellar built like a cistern, is also expected. Messrs. A. D. D. Wood and J. H. Larrabee will help to make the meeting a success.

This is the first time that the convention has been held in the Southern part of the State in several years; let us turn out and show our appreciation of the event.

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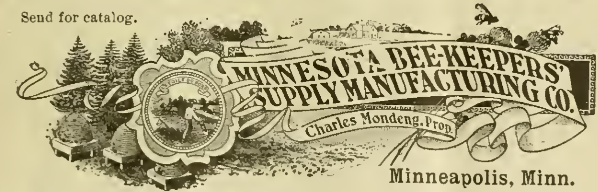
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HONEY AND BEESWAX
MARKET QUOTATIONS.

CHICAGO, Jan 9.—The demand is not more than usual; hence stocks are sufficient, especially as Cuba has now comb honey on this market. This is a new source of supply, and is a factor that must be reckoned with, as it obviates the necessity of laying in a stock during the summer and autumn to draw from in the winter and spring months. The best grades of white comb sell at 15@16c per pound, with travel-stained and light amber, 13@14c; darker grades, 10@12. Extracted, 7@8c for white, and 6@7c for ambers. Beeswax steady at 30c.
R. A. BURNETT & CO.

ALBANY, N. Y., Jan. 7.—Honey demand and receipts light. We quote white comb, 15 cents; mixed, 14c; buckwheat, 13@14c. Extracted, white, 7@7½c; dark and buckwheat, 7@7½c. More demand for buckwheat than any other here. H. R. WRIGHT.

KANSAS CITY, Dec. 20.—Market steady at quotations. We quote fancy white comb, per case, 24 sections, $3.50; No. 1 at $3.40; No. 2 white and amber, $3.25. Extracted, white, per pound, 7@7½c; amber, 6@6½c. Beeswax, 27@30c.
C. C. CLEMONS & CO.

CINCINNATI, Jan. 7—The demand for all kinds of honey has fallen off considerably in the last few weeks, owing to the many other sweets offered at this season of the year. Lower prices are no inducement to increase the consumption, as the demand is not there, and will not be until about the end of the month; consequently it is folly to offer at lower prices. We quote amber extracted in barrels at 5¾@6½c; white clover and basswood, 8@9½c. Fancy white comb honey, 16@17c; lower grades hard to sell at any price. Beeswax firm at 29@30c.
THE FRED W. MUTH CO.

NEW YORK, Dec. 23.—The market on comb honey is dull and inactive. While the supply is not large the demand has fallen off to a large extent and prices show a weakening tendency. We quote fancy white at 15c; No. 1, 14c; No. 2, 13c; and buckwheat at from 10@12c. Extracted is in fairly good demand; white. 7½c; light amber, 6½@7c; dark, 5½@6c. Beeswax firm at from 28@29c. HILDRETH & SEGELKEN.

CINCINNATI, Jan. 3.—The comb honey market is a little quiet, almost everybody being filled up. As there is hardly any new supply in, there is no change in prices, viz.: Fancy water-white, 16c; off grades less. The market for extracted white clover shows a slight advance. Fancy water-white brings 8½@9c; alfalfa water-white, 6½@7½c; amber, in barrels, 5¼@5½c. Beeswax, 27@28c.
C. H. W. WEBER.

SAN FRANCISCO, Dec. 17.—White comb honey, 11½@12½c; light amber, 10@11c; dark, 5@6½c. Extracted, white, 6@6½c; light amber, 5@5¼c; amber, 4@4½c. Beeswax, good to choice, light, 26@27½c; strictly fancy light, 29@30c.

The bulk of California produced honey is sold for Eastern shipment in carload lots from producing points at bottom price. Small lots of choice honey that can be used in local trade bring more. Quotations here given are current prices to producer, f.o.b. shipping point, on Eastern basis for extracted and California basis delivery point subject to agreement for comb.

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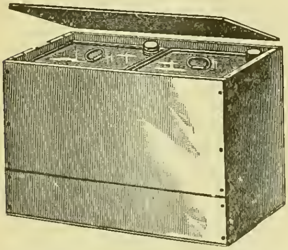

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The New Danzenbaker Nailless Cover. This is one which we believe will become very popular. It is a reversible flat cover. The FLAT cover is preferred by many large bee-keepers. It is metal-bound and already put together before leaving the factory. See catalog for illustration. This can be ordered for our regular Dovetailed hive either 8-frame or 10-frame. Investigate the merits of this cover before placing your order.

The "A" Bottom-Board. This is something entirely new this season. It consists of a 2⅝-inch rim with a tilting floor-board, allowing an adjustment of depth of entrance to suit season or individual preference of user. This bottom will also be found very valuable for cellar-wintering, and for moving bees there is nothing equals it for convenience and safety. Mr. F. A. Salisbury, of Syracuse, N. Y., a bee-keeper and supply-dealer of over 25 years' experience, says: "The new style 'A' bottom can NOT BE BEAT. We put up one, and it is THE THING."

German Wax-Press. This we've improved since a year ago, placing a heavy oak cross-arm above in place of cover-plates. We believe it is perfect in construction.

Corneil Smoker for 1903 has a new nozzle which is not inclined to topple over at the most inopportune time; this nozzle is supplied with wire-coil handle. The bellows is bound with projected metal bindings which protect the leather, strengthen the bellows-boards, prevent warping of same, and form a very convenient hold in operating the smoker. The general plan is the same as heretofore, but these added improvements make it much superior to anything we have formerly supplied. Made in three sizes. Prices: Jumbo, $1.25; Standard, 85c; Junior, 65c. Postage, 25c extra.

Vesuvius Smoker. This is the name of the new smoker we are preparing to furnish this year, which is entirely different from anything we have heretofore offered. It is a breech-loading hot-blast, with removable grate attached to cover. The nozzle of this smoker is fastened permanently to barrel. This has same metal binding as the new Corneil. Price, $1.00; postage, 25c exta. See illustration in the catalog.

Brass Smokers. We can supply the Corneil, Vesuvius, and large-size Bingham smokers with brass stoves at 25c each additional.

Super Springs. The supers sent out this season will contain removable springs instead of the stationary springs as formerly supplied.

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Agencies carrying a stock of our hives, etc., will be supplied with these improvements in good time for this season's trade. If you are not posted as to where you can buy our supplies advantageously, write us.

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AMERICAN BEE JOURNAL

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APIARY OF V. H. FISHER, OF GRUNDY CO., ILL.

(See page 68.)

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IMPORTANT NOTICES.

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The Wrapper-Label Date of this paper indicates the end of the month to which your subscription is paid. For instance, "dec03" on your label shows that it is paid to the end of December, 1903.

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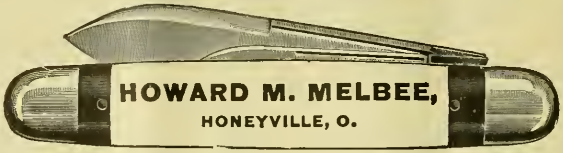
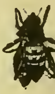
Advertising Rates will be given upon application.

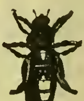
The Novelty Pocket-Knife.

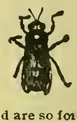
Your Name and Address on one side—Three Bees on the other side.



[THIS CUT IS THE FULL SIZE OF THE KNIFE.]







Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the subscriber, and on the other side pictures of a Queen, Drone, and Worker, as shown here.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a last-time, with proper usage.

Why Own the Novelty Knife ? In case a good knife is lost, the chances are the owner will never recover it; but if the "Novelty" is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the "Novelties," your POCKET-KNIFE will serve as an identifier; and in case of death, your relatives will at once be notified of the accident.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid for $1.25, or give it as a Premium to the one sending us THREE NEW SUBSCRIBERS to the Bee Journal (with $3.00.) We will club the Novelty Knife and the Bee Journal for one year, both for $1.90.

GEORGE W. YORK & CO. Chicago, Ill.

☞Please allow about two weeks for your knife order to be filled.

An Italian Queen Free

—IN MAY, 1903—

To Regular Paid-in-Advance Subscribers Only.

We wish to make a liberal offer to those of our regular readers whose subscriptions are paid in advance. It is this: We will send you FREE by mail, in May, 1903, an Untested Italian Queen for sending us $1.00 and the name and address of a NEW subscriber to the American Bee Journal for a year. This is indeed a big premium, as the queen alone would cost you 75c.

We are booking orders for Queens now for next May delivery. Will you have one or more? This offer ought to bring in many orders. Our queens are reared by the best queen-breeders, and give satisfaction.

Address,

George W. York & Co., 144 East Erie St., Chicago, Ill.

ESTABLISHT IN 1861
AMERICAN BEE JOURNAL
THE OLDEST BEE-PAPER IN AMERICA

43d YEAR. CHICAGO, ILL., JAN. 29, 1903. No. 5.

Editorial.

Honey for Tired Eyes.—It is said that when the eyes are tired from long study and reading, a little honey rubbed on the lids at night will relieve them. Easy enough for bee-keepers to try, if they ever have the tired eyes.

◆

Shipping and Grading Comb Honey.—This is a subject that we have written on several times during the past few years, and, judging from our annual experience we ought to write on it every time the season comes around for handling comb honey.

Recently we purchased a lot of honey from an Iowa bee-keeper. He did not ask us how we wanted it packed for shipping, nor did we volunteer the information, thinking that of course he knew how to do it all right.

There were over 40 twenty-four-section cases in the lot, and, would you believe it? They were shipped *singly*, instead of being packed six or eight cases in a crate, with straw under them, and the crate with two handles at each end.

And what of the result? There were just seven cases of it entirely broken out of the sections, and some more combs cracked more or less. What a pity, to produce comb honey, and then through inexcusable carelessness or ignorance ship it in a way that must inevitably result in a loss, besides a miserable, sticky mess to clean up, as it all had to be handled over section by section, wiped off, the cases washed out, and the honey put back into them, after sorting the broken from the whole combs.

Now, as to the grading: There wasn't any attempt at this. There was No. 1 white, amber, buckwheat, and granulated, all mixed in a case! Out of some 40 cases there were eighteen of amber and buckwheat, one of granulated, two of culls, and the balance No. 1 white. Had this lot of honey been shipped to some commission men, they would likely have paid about 8 cents a pound for the lot, calling it all amber and broken. They would not, in all probability, have gone to the extra work of sorting out the various grades, separated the broken combs, and cleaned up the dauby mess.

We hope this experience will not only teach a lesson to the particular shipper who sent this lot of honey to us, but our description of it should serve as a warning to all our readers who produce and ship honey, to prepare it properly for safe transportation on the railroad.

About the same time we received a shipment of nice, white comb honey from Wisconsin, which was prepared properly, with shavings in the bottom of the crate, and not a comb was broken down. It was also properly graded. There was a great contrast between the last shipment and the first one referred to. It was a pleasure to handle the Wisconsin lot, while the Iowa shipment was discouraging all the way around—undoubtedly to the shipper as well as to us.

◆

Simmins' Forced Swarms.—All the time there is coming to light fresh evidence that forced swarms have been made by many who have said nothing about it, and there are not wanting cases in which publicity has been given to the practice, but for some reason less attention was formerly given than lately to the matter, and so a repetition of things said years ago will now be timely. A letter from the well-known English authority, Samuel Simmins, calls attention not only to the method of forced swarms, published by him many years ago, but to a material difference in details which is worthy of serious consideration. Mr. Simmins says:

FORCED SWARMS.

Did you ever read my "Non-Swarming Pamphlet," published in 1886? If so, you will see how forced—then called artificial—swarms were to be hived on starters in preference to full sheets of foundation, with this very important difference:

"*All the bees* were taken from one colony, half the bees from another. *The latter had all the spare combs*—hence, still two powerful colonies *and no increase.*"

Now, why do you make *two weak colonies out of one strong one*, as you are all doing? Is that progress? Will that give you the highest results? Certainly it will not.

In my own case I was obliged to add one or two combs of brood, principally because the bees having nowhere to place the incoming pollen, would take it into the sections. After that there was no trouble in that direction.

Here is an extract from my "Non-Swarming Pamphlet," 1886, page 29, chapter on "How to Control Swarming:"

"When.....the honey-flow has commenced, select any two strong colonies......no matter how far apart; remove from one all the brood-combs but two left in the center......and fill up with three frames having guides only on either side. Now return *all* the bees by *shaking* and brushing from the combs; and also one-half of those bees from the second colony ......Then put on supers of a capacity of not less than 40 pounds at one time, with all sections *filled* with [drawn] combs."

The brood-combs removed were given to the other hive deprived of part of its population and this afterwards supered for either extracting or comb, and, with so many combs, this colony gives up all thought of swarming, though presently having an immense population.
SAMUEL SIMMINS.

The Future of Alfalfa, so far as it relates to bee-keeping, is a matter of interest to Western bee-keepers. While some feel no anxiety in the matter, others feel that the doom of alfalfa as a honey-plant is not many years in the future. The whole matter hinges chiefly on the time of cutting alfalfa for hay. It is maintained by some that for best results alfalfa should always be left standing till at least well advanced in bloom, while others maintain that it must be cut much earlier. The conclusions of the experiment stations as to this are not reassuring. Those of Colorado, Kansas, and Utah, are agreed that alfalfa must be cut when first coming into bloom—say when one-tenth is in bloom—in order to get the largest amount of protein—that part which is absolutely necessary in order to form blood and muscle. When the cutting is delayed till the plants are half in bloom, there is a falling off in protein, and a still greater falling off when in full bloom.

Even if all should agree that for best results alfalfa should be cut when not more than one-tenth in bloom, the plant will, no doubt, continue to be an important factor in bee-keeping. That tenth will mean a good many tons of honey. Then there will always be a liability to delay. Where a very large surface is to be cut it will not be possible to cut all in one day, if indeed in a goodly number of days, and every day's delay will mean just so much addition to the larder of the bees. A considerable acreage will be used as pasture, giving a continuous yield, and always there will be a considerable amount allowed to go through its full season of bloom for the purpose of maturing seed.

So at the worst there will still be no little for the bees, and with the usual hopefulness of bee-keepers the producers of alfalfa honey will keep right on gathering in their precious harvest until the time of failure comes—if it ever comes.

◆

The Value of Foods.—The following clipping from that important English periodical, Chambers' Journal, has been sent by a Canadian physician, Dr. W. O. Eastwood:

We once heard an intelligent child complain that "all the nicest things to eat seem to be unwholesome." If that child, now of larger growth, should happen to alight upon the report of a lecture delivered lately before the South-West London Medical Society, by Dr. Robert Hutchinson, he will rejoice greatly, for the lecturer demonstrated that many nice things have a very great dietetic value. He condemned many of the much-belauded patent foods, and showed that, upon analysis, they compared very unfavorably with meat, eggs, milk, and sugar. "A pound of honey at ninepence," he said, "is a better source of sugar than a pound of malt extract at three shillings." And, speaking of cod-liver oil as a means of administering fat, he remarked: "In cream you get a more valuable substance, because ordinary cream contains more than 50 percent of fat, and butter fat is as easily digested and absorbed as the fat of cod-liver oil, besides being much more palatable and considerably cheaper.

The lecturer also spoke highly of the value of chocolate and Everton coffee, because in both you get a combination of fat and sugar without water. Unfortunately it is difficult to make people believe in the great value of a diet within their reach. They will turn away from such commonplace things as milk and eggs, and go to any amount of trouble to procure costly preparations having only a tithe of their value as food. The lecturer's good opinion of cream, honey, chocolate, and coffee will be received with enthusiasm by the rising generation, if not by their elders.

It is gratifying to see that the medical profession are assigning to honey the important place it once occupied as an article of food and medicine. It certainly does not seem that the inclination to gag on the part of the patient aids in the assimilation of cod-liver oil, and if something at less cost can be substituted for it, at the same time substituting a pleasurable sensation for the gagging, common-sense would approve the substitution.

And the same common-sense would approve the substitution of honey for malt extract, however highly the latter may be esteemed, if the honey "is a better source of sugar" at one-fourth the cost.

May the tribe of Dr. Hutchinson increase!

Weekly Budget.

Mr. Morley Pettit, who was present at the Chicago-Northwestern convention, has begun a report of that convention in the Canadian Bee Journal, which shows that Mr. Pettit has his observer and his condenser both in good working order.

◆

The Death of Rambler—John H. Martin.—The following we take from Gleanings in Bee-Culture for Jan. 15:

THE RAMBLER SICK IN CUBA.

Mr. J. H. Martin, better known as "The Rambler," has been very sick with fever; but from the last account he was on the mend. He is getting to be pretty well advanced in life, reaching 63 last December; and the last time I saw him (in California) I could see that age was beginning to tell on him. He has been working hard in Cuba, securing a crop of honey, and we trust he will now save his strength sufficiently so we shall have the opportunity to enjoy again his good-natured chats.

Later, Jan. 13.—The sad news has just been cabled us by our Manager, Mr. de Beche, that Mr. Martin is dead. Of course, there were no particulars; but the run of the fever was evidently too much for him, and the end came all too unexpectedly.

Rambler's hosts of friends will sincerely regret to learn of his death. We hope to be able soon to give a picture of him and some biographical notes in these columns.

◆

The Apiary of V. H. Fisher appears on the first page. When sending the engraving, Jan. 17, he wrote as follows:

I started in the bee-business in 1894, with one colony, and now have nearly 50, besides having sold a number.

The picture does not show all the hives. The building is a honey-house, for storage of honey, hives, supers, extractor, tools, etc.

A folding bee-tent is also shown, piles of supers, and a solar wax-extractor near me, when I was holding a large frame of honey.

The hives are all improved 10-frame Langstroth, made by myself, as I am a carpenter by trade, and a manufacturer of hives in a small way, putting in all my spare time in winter and rainy days in the shop making them.

I have a 3-horse-power gasoline engine sawing machine, and other wood-working machinery in the shop. I make an improved gable cover for hives, which is first-class. If kept thoroughly painted on both sides it does not warp, check, or leak.

The latter part of the past season was first-class for honey (too wet early); I had supers fairly well filled that were put on Sept. 13 and 14. This was eight or ten days later than I have ever put on supers, and the sections were filled. I obtained about a ton and a half of comb and extracted honey from 30 colonies, spring count.

The prospects seem good for the coming season, as the bees went into winter quarters in good shape, with plenty of stores. Everything points to early swarms.

V. H. Fisher.

Convention Proceedings.

Report of the Ontario Bee-Keepers' Convention, Held at Barre, Ont., Canada, Dec. 16, 17 and 18, 1902.

REPORTED BY MORLEY PETTIT.

(Continued from page 54.)

WEDNESDAY—Morning Session.

PRODUCTION AND MARKETING OF EXTRACTED HONEY.

The subject assigned me by the committee is not one which I would have chosen, but as so much has been said in the past, and that by men of wider experience and a more thorough knowledge of the business, it might not be amiss for me to touch on some points which might raise a discussion, and in that way be of more service than would a lengthy essay, no matter how well put together.

First, in the production of honey, it is conceded we must have the bees to start with. Then we must have the man, and as neither one can produce extracted honey without the other, I would say the man is of far more importance than the bees. A first-class man will do far more with an apiary of inferior bees than could a useless man with the same number of colonies of the best strain of bees; and both together can not produce honey if there is no nectar to be gathered, as many of us have found to our disappointment. Granted all these conditions are favorable, what then?

First, we should aim to produce an article which will sell itself, if possible to do so.

Second, produce as much of it as possible. Quality first, quantity second, every time. What is "quality?" Flavor first, always; then body and color, or color and body, as circumstances require. This for the home market. For shipping purposes I would put color first in quality, flavor second, and body third. Why the difference? For shipping purposes honey must be attractive and catch the eye, and there is a pretty general idea abroad that lightness in color is a sure indication of superior quality, and we must please the eye. Now, if we can combine the richest flavor and firmest body with the lightest color—almost or quite water-white, if you wish—we will have the ideal honey. In actual practice, how many get that? You who have been selling honey of different shades direct to consumers may answer that question. Why should not a fine-flavored honey, which is a rich straw-color, or an amber color, stand ahead of a water-white which is lacking in flavor?

Question: How can we secure the highest flavor with the lightest-colored honey every time? Localities differ. Seasons differ in the same locality, and so does the flora in the same locality. Pure clover honey differs in shade in the same locality in different years, and so does it differ in different localities in the same year. Why is this? How should such honey be graded? I would say flavor should stand first. Allowing honey to be well ripened in the hive gives a finer, firmer body. Does it give a richer flavor? I think it does.

Second, the marketing. This is a matter needing our most careful attention. If it is the home market, just show the would-be purchaser some of that first-class honey, and it is sold—at least as much of it as they need for the present. A word of caution here: Don't sell too much honey in one house at one time. Let them clean up their dishes every few weeks. A jar of granulated honey on the top shelf of the pantry is not likely to help sell a very fine liquid article which comes to the door. Better let them want honey a few days. Supply a good article at a fair price, and you are tolerably sure of your customers, unless you keep them waiting too long.

Is the honey to be shipped and sold to strangers? Well, I give it up. There are commission men—good men and true, at least some of them—perhaps they don't know much about handling honey. Then there are men who are wanting to buy all the honey in sight, but are not prepared to pay much—there has been such an enormous crop. Ar they any help in marketing our honey? Then there ar some who might purchase a quantity at wholesale and pay a fair price, but who will bring the producer and dealer together? What about that honey exchange?

J. K. DARLING.

The discussion was at first on the amount of honey which should be sold to one private customer. The conclusion was that to new customers we should not sell large quantities, but an old customer knows what he wants.

With reference to candied honey, if we sell the honey liquid we should explain to the customer that it will granulate, and tell him to put it in sealers from which he can dig it out and use without melting it up.

Mr. Holtermann described a novel way of selling granulated honey. A barrel of honey is set up in a grocer's window, and the barrel taken off, leaving the barrel-shaped cake of honey. One grocer, last winter, sold three 600-pound barrels in this way after Christmas, and this fall gave an order for five barrels "as a starter." The honey is cut off the barrel with a wire, as cheese is cut, and wrapped in paper by the pound, or in any quantity the customer desires. This makes a splendid advertisement. It becomes the talk of the town.

This idea met with much opposition. The paper would taint the honey, the honey would collect dust and flies, it would absorb moisture and melt down, etc.; but Mr. Holtermann said that the proof is that it has been tried and has worked.

Mr. Dickenson—I like honey best candied, and my family does, too.

Mr. Brown—Bottled honey sells best liquid.

Mr. Sibbald—We frequently have bottled honey sent back because it has granulated.

Referring to Mr. Darling's paper, quality is most important. Many bee-keepers send out poor honey, even honey that will ferment. This hurts our business more than anything else.

Mr. Newton—We are not making much impression on people trying to teach them to use candied honey. They prefer the looks of it liquid.

Mr. Pettit—The trouble is, when we sell people liquid honey, and it candies on their hands, they say it has all "gone to sugar." Better sell it in its natural state, and put on a label with directions for liquefying.

Mr. Holmes—The barrel is a good thing if practical. Yet it is at variance with the modern tendency toward small packages.

Mr. Byer—We must use our judgment as to the trade. If put up in glass it must be liquid, yet we should further the sale of granulated honey as much as possible. For the home trade I use 5-pound and 10-pound pails, labeled with directions for liquefying.

Mr. Miller—Honey granulated in 5-pound slip-cover pails is clean to handle; if a customer tips a pail it does not drip, and it is always ready for sale.

Mr. Couse—If a man orders a quantity of honey I do not let him have it all at once. I can care for it better than he can, and take it to him liquefied just as he needs it. If the honey always goes out in good shape a great deal more can be sold.

Mr. Whitesides—We should get the honey into the hands of the poor as cheaply as possible. Selling in paper, or in lard or butter trays, tends in this direction. If honey is sold liquid it requires to be liquefied so often, and where it is in bottles this is difficult. It may be done by setting the bottles in a room kept at a temperature of 140 degrees, Fahr.

Mr. Morrison prefers a small tin package.

Prof. Shutt—We have learned that honey is very absorptive. In a dry atmosphere Mr. Holtermann's barrel might be all right, but in a damp climate it would accumulate moisture.

Mr. Holtermann—In a small city a barrel will be sold in ten days, so it has not much time to accumulate moisture.

Mr. Evans—Small barrels might be used for a smaller trade.

CLIPPING QUEENS' WINGS.

"How do you clip queens' wings?"

Mr. Miller—Set the comb on end, then follow her with the thumb and finger until you can grasp her shoulders. Then clip with a small pair of scissors, either on the comb or in the hand.

MOST PROFITABLE MANAGEMENT OF BEES.

"How would you manage bees to get the most money with the least labor?"

Mr. Miller—This is a big question. Roughly speaking, it is by out-apiaries, short cuts, and learning to get along with little skilled labor outside of your own.

SPRING PROTECTION OF BEES.

"What do you advise for spring protection of cellar-wintered bees?"

Mr. Miller—Reduce the entrance, and have good top packing.

Mr. Fixter—Set the bees in a place sheltered from cold winds.

THE BEST CLOVER.

"What is the best clover for both bees and farmers?"

Mr. Miller—Alsike clover.

Mr. Fixter—Alfalfa and sainfoin give more honey. Sainfoin is not so woody, and is cut later. It is also a better fertilizer. It gives a second crop, as alsike does not.

The general opinion was that alfalfa does not yield honey here, the climate being too dry.

MANAGING OUT-APIARIES.

"In managing out-apiaries, would you have a full outfit at each yard?"

Mr. Miller—Yes, and haul the honey home as soon as possible after the extracting is done.

SIZE OF BROOD-CHAMBER.

"Is 2000 cubic inches sufficient capacity for a brood-chamber to suppress swarming?"

Mr. Miller—We need a large brood-chamber.

Mr. McEvoy—Yes, the brood-chamber should not be too large.

Mr. Holtermann—The Dadants have used large hives successfully for 15 or 20 years. If you are a good bee-keeper you can get a 12-frame Langstroth filled with brood. The shorter the flow the more bees you want, and the less you want them to divide up by swarming.

C. W. Post—If you have a large hive you can reduce it when necessary.

Mr. Dickenson prefers a smaller hive for a short flow.

Mr. Heise—With a hive holding 10 frames 11 inches deep, and an exclusive clover flow, averaged 133 pounds per colony.

Mr. Chrysler—A good queen can fill a large hive with brood in fruit-bloom.

QUEEN-EXCLUDERS.

"Would you advise an all-metal or slatted queen-excluder?"

Mr. Armstrong—The Heddon excluder made with strips of wood and perforated metal is the best, but it is difficult to make. The all-metal excluder does not clog up so quickly with propolis.

Mr. Sparling has some excluders with 2-inch strips across the middle, which seem to work just as well as the all-metal.

DEPTH OF FRAME—PROSPECTS FOR 1903.

"Would you use a deeper frame than the Langstroth?"

Mr. Heise—I use a frame 11 inches deep.

Mr. Holtermann—It is best to keep to the standard.

"What are the prospects for next year's honey crop?"

Mr. Armstrong—They never were better. There is the most clover we ever had. If the alsike does not heave, and we have a good fall set, we may be sure of a good crop next year. I speak particularly for heavy clay land.

RETURNING SWARMS TO PARENT COLONY.

"Is it a good plan to return swarms to the parent hive after two days?"

Mr. Armstrong—No, they would be out that day or the next.

Mr. Darling—If it is a second swarm cut out the queen-cells and return them at once. In cutting the cells liberate on the combs all the queens which are ready to hatch, and run the swarm in at the entrance. If you happen to miss any cells they will swarm again; but these free virgin queens are different, and they insure the colony against accident to the queen which is out with the swarm.

CELLAR-WINTERING OF BEES.

Mr. Dickenson blocks each hive up from the bottom-board on four blocks, and tiers them up three high. Wintering is a matter of temperature, dampness cuts no figure. He runs his bees in on a truck; can put in 150 colonies in four hours. The bees are all right if they are quiet.

Mr. Brown lives near Ottawa. He wants to get his bees in Nov. 10 to 15, a day or so after a good flight. He removes the wooden cover and leaves only the propolis quilt on all except the top hive in the pile, on which he leaves the cover. He is not particular, but blocks up the hives where convenient. He has less than 3 percent dead in the spring when carrying them out. Temperature 40 to 45 degrees, Fahr. A ventilating stove-pipe runs from the floor up to the pipe of a stove in the drawing-room overhead. He finds the 10-frame Gallup winters better than Langstroth hives.

Mr. Holmes—Change the propolis cloth for a cotton and sawdust cushion.

Mr. Miller—I would do away with the blocking by leaving off the bottom-board and piling one hive across two.

Mr. Fixter—Mr. Pettit's plan works perfectly. Pile the hives on a bench which is higher at the back than at the front. Block up the back of the hive from the bottom-board with ⅜-inch blocks. Put on a chaff cushion to keep the top of the hive warm, so the moisture will not condense and run down on the cluster.

HOW TO EAT HONEY.

"How would you eat bread with honey on it if you have a large mustache?"

Mr. Armstrong—Perhaps Mr. Newton can tell.

The opinion of the meeting was that you should have Canadian honey of good flavor and body, then either turn the bread upside down or else stand on your head!

AN ADDRESS ON "PROGRESS."

Prof. Creelman, B. S. A., Superintendent of Farmers' Institutes for Ontario, gave a stirring address on the subject of Progress, at the second afternoon session. The object of these associations is to give information, and people are anxious for it. Twenty thousand persons attended the Winter Show at Guelph last week. A lecture room seating 600 was not able to accommodate one quarter the people who sought admittance. Here lectures were delivered at all hours of the day by men competent to speak on all branches of farming. Farmers were asking questions about bacon, poultry, beef, cheese. There is coming to be as great a demand for information about honey. All these other industries were but a short time ago in their infancy. When they began to boom, people feared over-production, but the demand has increased with the supply. A few years ago Canadian pork could not compete with Irish or Danish pork, but Canadians combined and forced in a good article. Jno. Bull is conservative, yet when he got a taste of Canadian "pea-fed" bacon his appetite for it increased at the rate of one million dollars' worth per year. We supply 70 percent of the cheese on the English market. Twenty-five million dollars is spent by England for Canadian cheese, and it comes mostly from Ontario.

Now give them a taste of Canadian honey; always send a good article, and there is no chance of over-doing the honey-business. In going from Liverpool to London you pass through large cities whose names you have never heard. All manufacturing cities produce not one pound of food, but all require to be fed from outside the country. Let the bee-men of Ontario get into line with the fruit-men and poultry-men, and create a more lively interest in the industry and the Association.

Prof. Creelman advocated a closer relation with the Department of Agriculture. He suggested an affiliation with the Fruit-Growers' Association. As we also have some common interests we could meet at the same time and place, and so get reduced railroad rates; advertise together; have joint evening sessions, etc. At the Fruit-Growers' convention each director was asked to bring in a written report of what they had done to advance the interests of the association during the year. The directors take pride in this sort of thing. If not, they are not elected next year. The Department of Agriculture is ready to do what they can to help every association as soon as they see good use is being made of the money.

With regard to selling honey, we must create a demand. Keep the papers full of it. Keep store windows full of it. Get people to eating honey instead of the adulterated jams, marmalades, etc.

The following is the

REPORT OF THE INSPECTOR OF APIARIES.

During the season of 1902 I visited bee-yards in the counties of Huron, Middlesex, Perth, Brant, Wentworth, Lincoln, Welland, Halton, York, Cardwell, Grey, and Simcoe. I inspected 91 apiaries, and found foul brood in 30 of them, and dead brood of other kinds in many others which had been mistaken for foul brood. I also found several fine apiaries completely cured of foul brood that had been reported to be diseased.

The frequent showers that we had in the early and middle part of the past honey season kept the bees in their hives for hours at a time, and this taking place when the bees had a very large quantity of larvæ to feed, caused a rapid using up of the stores, and as fast as the cells were emptied the queens layed in them, and soon after that all brood-chambers became full of brood, and as they were left in that condition, with the bees being driven in from time to time by the rains, which were followed by sudden warm spells, brought on the greatest rage of swarming ever known in the Province of Ontario, and created a great demand for comb foundation, and some bee-keepers not having any on hand, and not expecting to get any very soon, used some old combs (that were saved from colonies that had died from disease), and spread the genuine article—a thing the same parties will never do again.

All old, diseased combs should be melted and put through a wax-press, as that is the only kind of an extractor that will take all the wax out of old combs.

It would greatly improve the apiaries in many localities if their owners would use more foundation, and melt a part of their old combs each year until they were all renewed.

While on my rounds through the Province I was much pleased with the very generous treatment that I received from every bee-keeper. WM. MCEVOY.

(Concluded next week.)

Contributed Articles.

Heredity in Bees—Further Explanations.

BY L. STACHELHAUSEN.

ON page 422 (1902) I wrote a short article in which I tried to explain the way the worker-bees can transmit to their offspring their own qualities. Prof. A. J. Cook honored me by considering this article, and wrote an answer to it on page 567. Probably I did not express my ideas plain enough, because Prof. Cook speaks of the evolution in bees, and says:

"In all organisms parents....are ever producing offspring varying from each other.... Thus while all parents tend surely to transmit their own peculiarities to their progeny, there is always as surely a like tendency to variation."

In all this I fully agree with Prof. Cook, but in my article I did not intend to write about evolution of the bees, or the possibility of variation, but to consider the transmission of all regular characteristics, form and power of organs, and other peculiarities of the *worker-bees*, through the queen to the offspring of the *worker-bees*, while the queen and all her ancestors never possessed these peculiarities. This surely can't be called a variation, and so Prof. Cook's article does not cover the case.

We know that from an impregnated egg a queen can be reared, and this is quite in accord with other organisms, as the young queen is very like her mother (variations are possible). This needs no explanation, at least not for our purpose. Now comes the dividing point: By a certain nourishment of the young larva we get no queen, but a worker-bee from the same egg. (And under certain circumstances even animals, which are part queens and part worker-bees). These worker-bees are not variations of the queen, but the regular progeny of the queen, and quite unlike herself. The problem is to explain this, and this is entirely impossible, if we consider queen and worker-bees as independent animals.

Our theory is, that the queen is no perfect animal; her sexual organs and functions are fully developed, but all organs for nourishment are undeveloped, or entirely missing, not only the inner organs but the exterior organs of nourishment, as for honey, pollen, etc., too. The queen is not able to preserve her life without the worker-bees, not even for some hours. On the other side, in the worker-bees the sexual organs are rudimentary, but all organs for nourishment are fully developed. We say the true female animal is *queen and worker-bees combined*. With bees we have the peculiarity that the sexual organs are in a separated body, and the organs necessary for nourishment in another separated body. The way in which they are nevertheless closely connected, I tried to explain in different articles.

Another theory is possible: We can say some ancestors of the queen had all the organs and instincts which we at present observe with the worker-bees, and the power to transmit these peculiarities remain latent in the queens, and appear regularly by a certain nourishment of the larvæ. This theory is very improbable, and, if true, would make impossible any further evolution of the bees.

If we accept our theory we have no more difficulty. In the same way, as it is possible, that the egg of a mammalia inherits the disposition to develop into an animal with the same form of the head or the legs, etc., as the parents have; it is impossible, too, that the eggs produced by this *combined female bee* can develop into a queen or into a worker-bee (or into a drone, if not impregnated); and which one of these forms will develop depends entirely on the food given to the larvæ. The food is deciding, but the disposition for these different developments must be inherited. The fact that in the female bee the sexual organs are in a body separated from the body which contains the nourishing and blood-forming organs, is a peculiarity of the bees, and does not alter the functions of the organs at all. The discovery of how these different bodies work together is one of the most important discoveries in the physiology of bees, and solves problems which were unsolvable before, and it was the purpose of my article to explain this. It is astonishing that all this is entirely ignored by the bee-keepers in the United States.

On page 568 (1902) Prof. Cook says: "This mother-queen had the power to transmit them [the good qualities of the worker-bee] else they [the young generation of worker-bees] would not possess them." Just so. But the question which I raised is: How can she transmit these qualities which she or her next ancestors never possessed?

If an Italian queen is mated to a black drone, the drones from this queen, according to parthenogenesis, will be pure Italian drones; but if our theory is correct, and the worker-bees are hybrids, these drones should show at least a small sign of black blood. Different prominent bee-keepers (among them Mr. Doolittle) are said to have observed this small amount of black blood. Some concluded, from this fact, that parthenogenesis was an error. As we had other proofs for parthenogenesis, we considered these observations as impossible, and mistakes; but if we accept our theory we have no more difficulty in explaining the fact. That the influence of black and hybrid nurse-bees is not more visible in the color of the offspring is no proof against the theory, as the power to transmit certain pecularities may be different, so that queen and drone have more power to transmit the color.

What Prof. Cook says about the evolution of animals, especially bees, is very interesting. That a change of environment causes some variations in animals is surely true, and we see this in all our domestic animals which at present are so much different from the wild animals from which they are descendants, that we, in some cases, have to consider them as different species. Bees, too, to a certain degree change their habits. If we use very large hives, for instance, the bees will by and by lose all desire to swarm. Even here these peculiarities must be transmitted to the progeny from the worker-bees, if they should become fixed.

Another way of evolution is by acquired peculiarities. If the worker-bees of a colony should, by much stretching and using of the tongue, acquire a longer tongue, this would not help anything toward improving our bees if the worker-bees could not transmit their own peculiarities to the coming generation. Bexar Co., Texas.

Sweet Clover—Is It a Noxious Weed?

BY C. P. DADANT.

I NOTICE on page 803 (1902) that a reference is made to us in regard to what we have said about the sweet clover being easily destroyed by cattle. I wish to give the sum of my experience on the subject.

Sweet clover was introduced in this part of the country by an old friend of ours, in the fifties. This person at the same time brought the seed of dandelion. There may have been others who brought these seeds as well, but we know of these instances because our friend told us that the two plants mentioned were not in existence around here until he sent for the seed. He had sowed the sweet clover in a very steep hillside near the Mississippi river, on the commons, but the place was so steep that the cattle could not get all of it, and it kept reproducing itself till my father went and gathered some of the seed for a trial of it in cultivation.

We had then a narrow strip of land fenced in by the original owner on the outside of our farm limits. This strip was three-cornered, and unpleasant to plow, and for that reason we put it to sweet clover. It remained in sweet clover probably for ten years or more. At the end of that time, a survey showed us that it was outside of our farm limits, which we did not know till then. We concluded to remove the fence to the line. This left the sweet clover exposed to all the cattle of the vicinity, as all open land was at that time.

Within two years, that sweet clover which had grown to the height of six feet or more, and had been so thick that a man could make his way through it with difficulty—that clover, I say, had all disappeared, and had given place to the blue-grass and white clover that usually cover our commons when regularly pastured. When I say it had *all* disappeared, I mean it in its broadest sense, for there was not a single plant left. It had been entirely destroyed by two years' pasturing that only causes the blue-grass and white clover to thrive that much better in the same spot. Of course, it was close grazing that did it. Our farmers will all remember that pasturage became very short upon the commons of Illinois just before the law was passed which forbade cattle running at large. Had this been a fat pasture, I suppose that enough of the sweet clover would have been left to keep it alive in a small way.

Now the fact I have just narrated evidences the ease with which the clover can be eradicated, and this is of some use to the bee-keeper. Many persons have accused bee-keepers of introducing a noxious weed when they sowed sweet clover in their neighborhood. But this is *not* a noxious weed. Although it will grow wherever other weeds will grow, it does not invade cultivated fields. It cannot invade them since it is a biennial, and therefore offers two seasons in succession for its eradication. Granting that it may come up in a field during the year, it cannot bloom the first season, and therefore the plowing of the following spring will destroy it before it has seeded itself.

Sweet clover is rank in growth, and masters the soil only in out-of-the-way places where neither stock nor cultivation interferes with it, and in those places it takes the places of much more noxious weeds than itself. It emits a sweet perfume, which is certainly preferable to the smell of the jimson-weed (datura stramonium), and it does not cause diseases like the ragweed which we all know is responsible, through its pollen, for the existence of hay-fever—a disease which is only known where the ragweed exists. The sweet clover not only occupies the place of the latter weed but chokes it out of existence by its most vigorous growth wherever these two weeds are left free to fight the battle of the "survival of the fittest." In addition, sweet clover is one of the greatest soil-enriching plants in existence, for its roots are long and large, and it takes most of its nourishment from the atmosphere.

Those who complain of the existence of sweet clover do not take into consideration the fact that some weeds must grow where sweet clover grows. So is it not much better, and more profitable to the community, to have a useful honey-producing, sweet-smelling, healthy and a soil-enriching plant, than the rank, ugly and unhealthy, useless ragweed?

Do not understand me as saying that sweet clover is a good pasture plant. If it is allowed to grow, it is too rank for a good pasture plant. If pastured close, it does not stand the strain. So it is only an inferior pasturage plant. But it makes good feed for stock if taken at the right time. We have a friend in the Province of Quebec—a Mr. Peloquin—who has repeatedly told us that sweet clover proved quite a boon to them in their cold climate. When spring opens in Quebec, it takes a long time for pastures to become good. But it appears that sweet clover of the second year's growth gets to be about a foot high before any grass can be had. They then mow it and feed it to the stock. This mowing does it no harm, and they can still count upon a honey crop and quite a little feed from it even after having secured from it an early stock food-crop which nothing else would furnish.

I think the reader will agree with me that the sweet clover deserves no blame, but that, on the contrary, it should be introduced on all soils where weeds are expected to grow, even if it were not a first-class honey-producing plant. Hancock Co., Ill.

The Nucleus Method of Rearing Queens.

BY DR. E. GALLUP.

MR. ALLEY says, "How this must surprise my friend Dr. Gallup," after saying that he worked on the plan that if a colony was deprived of its queen the bees would rear another. Yes, I was surprised that a man after having as much experience as he claims he has had, should still advocate the rearing of queens on the nucleus plan and recommend others to use it.

Farther on he says that he knows by actual experiment that just as good queens can be so reared, as can be reared by any other method ever given to the public; and I know by actual experience that they cannot be, and are not as good. I have come to the conclusion that Mr. Alley does not even know what a good queen is. I quote from Prof. Cook's Manual, pages 91 and 92:

"We should infer that the best queens would be reared in strong colonies, or at least kept in such colonies until the cells were capped. Experience also confirms this view. As quantity and quality of the food and the general activity of the bees are directly connected with the full nourishment of the queen-larvæ, and as these are only at the maximum in times of active gathering—the time when queen-rearing is naturally started by the bees—we should also conclude that queens reared at such seasons are superior."

My experience—and I have carefully observed in this connection—most emphatically sustains this view. Now, Professor, how dare you so emphatically contradict Mr. Alley, a man who according to his own statement, reared queens in nuclei before you or I knew anything about bees? Isn't that funny?

Mr. Alley says at the conclusion of his article that he will risk his reputation as a queen-breeder on the result. I cannot see for the life of me, how his reputation can be very great when by his own showing 90 percent of his 50,000 queens reared have turned out to be worth as much as so many flies. Only think, 45,000 worthless queens he must have been rearing just for fun! Isn't it astonishing, how large minds often run in similar channels? I started in and reared my first queens by tying a piece of comb with a string to the top-bar of a frame, and using a small quantity of bees, for I then supposed that a queen was a queen, no matter how she was reared; but, it did not take me 50 years to find out that queens reared in this way were worthless, and inferior in every respect, and that the plan is unnatural, unreasonable and unscientific. It is unnatural to deprive a colony of bees of their queen and compel them to rear a queen at any time, whether conditions are right or not.

Now, what are the natural conditions? The colony is strong in numbers, they are gathering abundance of stores, thus keeping up an abundance of warmth and vitality, they also have lots of nursing-bees to prepare the royal jelly, etc., all of which is lacking in the nuclei. The cells are started and the queen deposits the egg in the cell. If even after the cells are started, and all is proceeding right so far, if from any cause the supply of forage is cut off suddenly swarming is abandoned, the cells are cut down, drones are expelled, and there is no more swarming that season, even if the weather is ever so propitious, until a new crop of drones is reared. This accounts for the bees clustering outside and not swarming so many seasons in old box-hive times. How many seasons we have watched in vain for swarms, and no swarms came out. Any person, we care not who, that practices the nucleus plan of rearing all his queens, for a series of years, will find his colonies running to the lowest ebb. Any person, we care not who, that practices rearing his queens in extra-strong and populous colonies, and under the swarming impulse, will find the reverse, and he will find the first-named queens and workers short-lived and unproductive, while the last-named will be long-lived and productive, even in comparatively poor seasons. Don't expect to bring your queens up to the standard in one season.

I wish to say to A. C. F. Bartz, on page 760 (1902), please don't class me with the professional queen-breeder, as I have never reared queens for market, never have sold a single queen to my recollection, but there is probably no man living that has expended so much time and labor in experimenting with bees, on nearly all lines, purposely for my own satisfaction, and as I have been a noted and prominent writer I wished positively to know by my own experience what I was writing about, regardless of what other people said. I am keeping a few bees now on purpose for my own amusement, and for experimentation.

At the time I had such a great loss of queens, you can see all were reared on the Alley plan, that is, no queen in the hive. In losing the queens I also lost the colonies, as none of them were superseded. Why? Because the queens failed so soon and so suddenly that there was no unsealed brood or eggs for the bees to rear a queen from. When I saw the first queen crawl out of the hive, I picked her up and placed her back into the top of the hive, and she immediately crawled out at the entrance again. I then opened the hive and examined for queen-cells, and found none, and the brood all too far advanced to rear queens from. In watching closely I saw 4 other queens crawl out in the same manner, and no queen-cells and no brood to rear queens from.

Now, Mr. Alley cannot say that the loss was owing to my ignorance in introducing in those cases. I will give Mr. Alley the credit of trying to crawl out of a smaller hole than I ever attempted to crawl through. The reader will see that those queens were not introduced at all, but reared right in the hive. Don't understand me as saying that I saw all those queens crawl out in one day, or at one time, but on different times and days. The most of those that died in the winter I found either on the bottom-board or dropped by the bees in front of the hive.

I had noticed the loss of queens and colonies previous to this, but did not pay much attention to the matter. All were reared on the Alley plan of depriving a colony of their queen. But the above wholesale loss set me to studying into the matter. I have tried the plan of filling a colony full to over-flowing with young bees, brood, etc., and then taking their queen away and compelling them to rear queens. They usually rear a lot of queens and do fairly well for two seasons, but they do not begin to come up to good queens reared under the swarming impulse. In fact, as far as I have discovered, they lack the missing link. Please see Mr. Riker's article, on pages 766 and 767 (1902).

Please do not borrow any trouble about Gallup not being able to keep up his end of the row. Alley's tirade of abuse and misrepresentation harms no more than water harms a duck's back. I am just enjoying the fun, and in the meantime trying to interest the general reader. I am not, and never have written for the benefit of those that know more than I do, but for those that know less. I never claimed to know it all.

Now, let any person that wishes to improve the race of bees try the Alley plan and see for himself, if he chooses. This is a free country; but I can tell that he will make a move in the wrong direction. Then let him try the plan of rearing queens in large hives, with strong and populous colonies—the stronger the better—and see how he comes out. Let him start with the very best queen he can get in every respect, not one that has been reared on the Alley plan, for it may take three or four generations to bring them anywhere near the natural standard; then see which he will choose for profit. That is somewhat different from Alley's advice. Any one has the same privilege to go over the same ground that I went over years ago, instead of believing either Mr. Alley's or my bare statement. You can readily see Mr. Alley is seeking a free advertisement, while I have nothing to sell. The contrast between the two kinds of queens will be so great that a blind man with his eyes shut can note the difference. Orange Co., Calif.

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

Amount of Foundation to Use in Sections.

It is very necessary that foundation be used in sections, at least enough for a guide, so the bees will build straight. There may be a diversity of opinion as to how much is best to be used, but all, I think, will agree that at least a starter is a necessity.

Some think it cheaper to furnish just a starter, and let the bees build their own comb; while others think it best to give the bees all the advantage they can in the way of foundation by putting in full sheets.

So far as concerns getting the comb started in the middle of the section, a starter half an inch deep will answer.

Of course, this means a saving in the purchase of foundation.

There are, however, good reasons why some think it better to put in a large amount of foundation, even to filling the section full.

Where a small starter is used, there will be more or less drone-comb built, and a section containing part drone-comb does not present so good an appearance; and you know that in comb honey the matter of looks is important.

Another thing: There is generally very little drone-comb in the brood-chamber, not as much as the bees would like to have used for drone-brood, and when drone-comb is built in the sections there is much likelihood that the queen will lay in the sections unless queen-excluders are used.

Even if excluders are used, the bees will hold some of the drone-comb open for the queen to lay in, thus leaving parts of sections unfinished.

Another advantage, and at times the greatest advantage of all, is the fact that when a flood of honey comes, the bees have a greater surface to work on with full sheets, and there seems plausibility in the claim of some that more honey can be secured than by using small starters. It surely must be a saving of time for the bees.

The question for each one to decide for herself is whether the saving of cost of foundation by using small starters will be worth more or less than the advantages of full sheets.

We have decided the question, that for this "locality" we can not afford to have anything less than full sheets.

Look Out for Mice in the Bee-Cellars.

You are not forgetting those mice in the cellar, are you? If you are, you will be ready to vent your vengeance on them next spring when you see the big holes they have made in your nice combs. You would better vent it now with a little strychnine and cheese. It will be more to the point.

I think I hear some one say, "She told us that before." So I did, but if you are any like me you will need some one to tell it to you often, else you forget.

A Thermometer for the Bee-Cellar.

Have you a thermometer in your cellar? If not, you would better get one and keep it there. You can get one for 15 or 20 cents.

About 45 degrees is generally considered the best temperature for bees, but all thermometers are not alike. If you have a lot together you may find that they vary ten degrees. How are you to know which is right? Put your thermometer in your cellar, then keep close watch of your bees, and see at what temperature your bees keep the most quiet, then try to keep them at that temperature.

That is the right temperature for you. At least that is what your bees say.

Honey-Muffins.

Two eggs, 2 cupfuls flour, ¾ cupful extracted honey, ¾ cupful milk, 1¼ tablespoonfuls butter, 1¾ teaspoonfuls baking powder, ½ teaspoonful salt.

Separate the eggs. Beat the yolks until thick, melt the butter, add it and stir in the honey, milk and salt. Sift in the flour, beating until smooth. Then fold in the whites of eggs, which have been beaten stiff. Add the baking powder at the same time. Bake in muffin-rings set on a griddle. When done, drop a bit of butter on top of each, sprinkle with pulverized sugar, and serve; or, omitting the sugar, pass extracted honey with them.

For special occasions a delicious sauce is made from honey and almonds, two tablespoonfuls of finely shredded blanched almonds being mixed in each cupful of honey.—The Delineator.

Why Not Help a Little—both your neighbor bee-keepers and the old American Bee Journal—by sending to us the names and addresses of such as you may know do not now get this journal? We will be glad to send them sample copies, so that they may become acquainted with the paper, and subscribe for it, thus putting themselves in the line of success with bees. Perhaps you can get them to subscribe, send in their dollars, and secure for your trouble some of the premiums we are constantly offering as rewards for such effort.

✻ The Afterthought. ✻

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, O.

EASY FALL INTRODUCTION OF QUEENS.

Glad it was the careful Mr. Doolittle that said the usual precautions of introducing queens can be dispensed with late in the fall when brood-rearing has entirely ceased. Reasonable—but we want some good testimony in addition to sweet reasonableness when a queen's life is at stake. Just remove old one—wait two days—drop in new one. That the bees shall be quiet, and not cross at the time, is to be assumed, I suppose. Page 787.

UNTESTED AND TESTED QUEENS.

It would be nice to say, "Untested queen," "Color-tested queen," "Tested queen"—making three grades; but the breeders, or some of them, are going to hang on like a bulldog to the old established use of the term, "Tested queen." You see. Page 787.

INFORMATION ABOUT THE HONEY CROP.

So 48 out of 400 Colorado bee-keepers return a postal card sent to them with request for information about the crop. And Californians are not "spry" to give away their information to Coloradoans, and *vice versa.* Shall we scold? Or shall we smile—and say, Let's quit trying to travel on the good-nature of other people? Page 789.

OLD LOCALITIES VS. THE NEW.

Yes, many old localities must see their crops gradually decline (on the average); while on the plains, as dandelions and white clover and sweet clover, etc., come in, the change is the other way. Interesting to see that in Hall Co., Nebr., from 1860 on, bees *lived* six or seven years—no surplus, no swarms—but now swarms and surplus all the same as in the white man's country. Wm Stolley, page 791.

WISE BEE-KEEPERS STORE NOW.

Bees are not storing now, but wise bee-keepers are. Just so, Sister E. M. W. Page 792.

ADVANTAGE OF OBSERVATION HIVES.

Ralph D. Cleveland is right. There ought to be lots o' more simple, cheap observation hives. The reasons he gives are correct—and in addition it would advertise our business and sell our honey much more than enough to pay cost. Pages 801, 805.

BALLED QUEENS.

Against Mr. Doolittle this time. Can't back him, except that possibly he may be right as to his own locality. When the bees of a newly-hived swarm ball their queen, give up to them at once—that the incident is a failure, and that the bees may as well go back to the old hive first as last—do that anyhow. This is about what my experience indicates. He says it is *exceptional* for them to ball her the second time after she has been properly released. Page 804.

WHY THE BEES ATTACKED THE HATPIN.

On the issue between Mrs. Snyder and Miss Wilson, as to why the bees attacked a black hat-pin and not the black veil where drawn over the edge of the hat, I'll venture this guess: It takes black color *plus something else* to stir the dander of bees very much. Probably the hat-pin sparkled which the veil did not. Possibly also it had a little chain, or dinglet of some sort, that kept bobbing around. I have seen bees attacking the end of a stove-pipe out of which smoke was crinkle-crankling. Sparkles and quick motions much worse than any possible color. Page 609.

APIARY GARMENTS—SMOKING BEES.

Mrs. Snyder's best new idea is that a garment worn in the apiary and nowhere else will *contract an odor* conciliatory to the bees. Looks quite reasonable.

To smoke a colony—wait ten minutes—smoke again—wait ten minutes more—smoke again—rather expensive of precious time. But I once had a colony I so dreaded to encounter that I wouldn't have minded the time. For timid persons, just for the first time getting up spunk to handle bees, I should call it an excellent device—one of the best possible. Page 609.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

Sowing Sweet Clover on Waste Land.

I want to know something about planting sweet clover. I am thinking of going into the bee-business, and if I do I will go to Butler Co., Pa. I would have two or three hundred acres of worn-out ground for pasture; briars and curly grass grow on it now. If I sow sweet clover around over the ground, would it take hold? Or what could I plant on it for pasture? OHIO.

ANSWER.—The likelihood is there is nothing better for your purpose than sweet clover. If you scatter the seed where it will be tramped in by horses or cattle it will be pretty sure to catch, no matter how hard the ground. Indeed, it seems to grow better on a hard roadside than on soft plowed ground. There is one danger, however, and that is, if stock that has learned to eat sweet clover is allowed to run on it when it is young, they may eat it down so closely as to kill it.

Pollen in Combs.

I send a piece of comb that I cut out of a brood-frame, and would like to know what is in the cells. It was gathered about the middle of June. Will the bees clean it out? If not, what can I do with it? About half of the brood-chamber cells are filled with it. MICHIGAN.

ANSWER.—I find nothing in the cells except a good supply of pollen, and that is in fine condition. If there is an unusual amount of it in the hive, you can give some of it to other colonies in the spring. In most places a pound of pollen is worth as much as a pound of honey; when scarce it may be worth a good deal more.

Sowing Sweet Clover.

1. When is the right time to plant sweet clover?
2. Does it bloom the first year?
3. What kind of land should it be sown on? I want to order a 5-pound package, and before sowing I want to know all about it.

I have 2 colonies of bees to commence with next spring. They are in box-hives, but after swarming I intend to transfer them into good hives. They are Italians. MISSOURI.

ANSWERS.—1. The seed may be sown in your vicinity, and it is well to have the ground made quite solid with a roller or otherwise. One of the most successful ways of getting a stand of sweet clover is to sow it on hard ground either fall or spring, and they have it well tramped in by live-stock.

2. It does not bloom till the second year, and dies root and branch the following winter.

3. It will not grow on solid rock nor in clear water; almost anything between these two will answer. It makes a fine growth on tough clay where nothing else cares to grow.

Average Per Colony from Linden, Etc.

1. How much can 6 good colonies store in an average year, from say 25 average-size linden trees?

2. I work in the Cleveland parks. Would the honey from park shrubbery, where there is some Kalmia latifolia, rhododendrons and azaleas, be injurious? OHIO.

ANSWERS.—1. I don't know. In a very good year I should think the bees would have all they could do while the yield lasted, there being four trees to each colony; and if so the amount they stored would depend on the length of the harvest and the amount of yield each day. The daily yield might be 10 pounds for as many days, making 100 pounds per colony. But then my guess that four trees would keep a colony busy may be all wrong, and a good many years there would be nothing at all from the lindens, some years a light yield, and some years a very short yield. Possibly the average yield might be 25 or 30 pounds to the colony, but I'm ready to let some one that knows more about it prove that my estimate should be doubled—or cut in two.

2. I should not be very anxious about it.

Will August Bees be of Value in Spring?

Will worker-bees reared in August and September live through the winter? and long enough in the spring to be of any value in brood-rearing?

They had out-of-door exercise until Dec. 1, 1902; since then they have had no flight at all. It is now Dec. 28.

ARKANSAS.

ANSWER.—The lease of life of a worker-bee is a very variable quantity, chiefly depending on the amount of work done. With a good fall flow, a bee born in August is likely to die before November. If there is nothing for it to do from the time of its birth till cold weather, it may live to do fair work the following spring.

McEvoy's Plan of Increase is given in the Canadian Bee Journal. His plan of putting frames of brood into extracting-supers, barred from the queen, so as to be sure of brood well fed and all sealed, is worthy of attention. He says:

Early in the honey season I lift two combs *full* of brood (*about ready for capping*) above the queen-excluders in many of my strongest colonies, and leave them there for nine days (the time it takes from the egg to the capped brood), so as to get all the brood *extra-well fed* and capped over. After these combs of brood have been nine days above the excluders, I collect two combs of brood from one super, two from another, and two from a third, with plenty of bees to cover them, and place these six combs of brood in an empty hive, and then give them a *protected* queen-cell, or a comb with eggs in from one of my best colonies, so that they can rear a queen, or cage a queen on the comb for about 24 hours, if I have one. The brood in these six combs being *far advanced* when it is placed in a new hive, will all be hatched out in a few days after.

I add brood to these young colonies from time to time until they are very strong in bees, and place supers on the early-made ones, and from these in fair honey seasons I get a super full of nicely capped honey.

The Premiums offered this week are well worth working for. Look at them.

◆

Please send us Names of Bee-Keepers who do not now get the American Bee Journal, and we will send them sample copies. Then you can very likely afterward get them subscriptions, for which work we offer valuable premiums in nearly every number of this journal. You can aid much by sending in the names and addresses when writing us on other matters.

◆

Our Wood Binder (or Holder) is made to take all the copies of the American Bee Journal for a year. It is sent by mail for 20 cents. Full directions accompany. The Bee Journals can be inserted as soon as they are received, and thus preserved for future reference. Upon receipt of $1.00 for your Bee Journal subscription *a full year in advance*, we will mail you a Wood Binder free—if you will mention it.

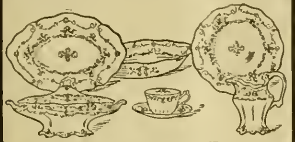
◆

Honey as a Health-Food is the name of a 16-page leaflet (3½x6 inches) which is designed to help increase the demand and sale of honey. The first part is devoted to a consideration of "Honey as Food," written by Dr. C. C. Miller. The last part contains "Honey-Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by every one who has honey for sale. It is almost certain to make good customers for honey. We know, for we are using it ourselves.

PRICES, prepaid—Sample for 2 cts.; 10 for 10 cts.; 25 for 20 cts.; 50 for 35 cts.; 100 for 65 cts.; 250 for $1.50; 500 for $2.75; 1000 for $5.00. If you wish your business card printed at the bottom of the front page, add 25 cts. to your order.

Save Trouble

Are you one of those people who go around bothering your friends and neighbors to buy some Tea or Soap or Jewelry or something else they don't want, so that you can get up a club and get a Dinner set for a premium! If you are you can just quit right now. Send us one-quarter of the money you are trying to raise, get a better dinner set, and keep the good will of your friends.



Elysian Pattern, Semi-Porcelain Ware.

This elegant ware is made by J. & G. Meakin of Hanley, England. Each piece bears the stamp of the Royal crown and their name as a guarantee that it will not craze. The ware is thin and dainty, like French china. The shape is elegant, as shown in the cut. The decoration is a double border of scroll and flower work all under the glaze, so it is perfectly smooth to the touch and can never wear off. The color is a bluish green, something entirely new and in excellent taste. It is all of the first selection. No seconds or imperfect pieces, and is such a set as you would be lucky to get for $15.00 in any retail store. The set contains 12 each Pie, Tea, Breakfast, Sauce and Butter Plates; 12 Cups and Saucers, 2 covered Vegetable Dishes, 2 scallop Vegetable Dishes, 1 covered Butter Dish, 2 Meat Platters, 1 Sauce Boat, 1 Sugar, 1 Creamer, 1 Bowl, 1 Pickle Dish. 100 pieces in all for only $8.37 and if you send us $1.38 extra we will send 12 footed Bowls for soup, mush and milk and many other uses. This would make 112 pieces for $9.75. If you live in Michigan don't answer this ad, because we only sell to the trade in Michigan, but outside of Michigan you now have the opportunity to buy anything you want in Furniture, Carpets, Lace Curtains, Wall Paper, China, Silverware, Hardware, and house Furnishing Goods at actual Wholesale Prices. You can save ⅓ to ½ on all your purchases in this line. All Furniture dealers buy in Grand Rapids. Why don't you? We manufacture or import direct almost everything we sell. Free samples of carpets or wall paper sent on receipt of 10c to pay postage. Send for our 300-page illustrated catalog. We pay postage.

H. LEONARD & SONS,
46 Spring St. Grand Rapids, Mich.

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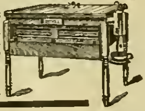
30 Days Free Trial

The Royal Incubator

is so good and works so well that we don't ask you to buy it before you try it. Entirely automatic: certain in results. May we send you one on trial? Catalogue free.
ROYAL INCUBATOR COMPANY,
Dep. 78, Des Moines, Ia.



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HIGH CARBON COILED SPRING STEEL WIRE
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CATALOGUE FREE.
INDIANA STEEL & WIRE CO.
BOX 529, MUNCIE, INDIANA.

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A COOL MILLION

of Snowy Wisconsin Sections, and 10,000 Bee-Hives, ready for prompt shipment. Send for catalog—it's free.
3A13t R. H. SCHMIDT & CO, Scheboygan, Wis.

"How to Make Money with Poultry and Incubators" is the title of the new 1903 Poultryman's Guide and Catalog (196 pages) of the Cyphers Incubator Co., of Buffalo, N. Y. It shows photographic views of the largest and most successful poultry plants in the United States, England, Germany, New Zealand and South America, and contains twelve special chapters, each written by an expert, treating of profitable poultry keeping in all its branches, as follows: Starting with Incubators, Handling Chicks in Brooder, Feeding Chicks, Duck Producing on Large Scale, Broiler Raising, Profitable Egg-Farming, Egg and Poultry Combination, Egg and Fruit Farming, Scratching-Shed House Plans, Incubator Cellar and Brooding House Plans, Feeding for Eggs, Standard-Bred Poultry. Most valuable book of the kind ever issued. Write to-day for free copy, asking for book No. 50. Sixty pages devoted to illustrated description of Cyphers Non-Moisture Incubators, Apartment Brooders, Poultry Foods and Clover Products.

Self Supplied Moisture

Please mention Bee Journal when writing.

FROM MANY FIELDS

Encouraging Signs in California.

I have the pleasure of telling that we had about 2½ inches of rain, as a God's blessing on our dry earth. Since the middle of last April we have had no rain, but we are having fine weather in Southern California. The new life of green shows everywhere, as the new hope of a good crop of everything.

At Christmas it is a beautiful sight to see the valley flowering and green, and the heads of mountains covered with snow.

This last year our honey crop was almost a failure; some got only 300 pounds from 75 colonies. My bees gave me 4 tons of honey from 200 colonies. F. S. BUCHHEIM.

Orange Co., Calif., Dec. 27.

Good Convention—The Exchange.

I am going to take the American Bee Journal as long as I live. It is worth more than the dollar.

We had a good convention at Barrie, and started a Honey Exchange, the Directors being as follows: H. G. Sibbald, C. W. Post, Wm. Couse, W. A. Chrysler, and John Newton. I have unlimited confidence in every one of these five men, and in the near future I expect to see them handle over 100 tons yearly, of the best quality of honey in the world.

The bee-industry of Ontario is booming, and after our Honey Exchange gets into good working order it would not surprise me very much if it would handle as much as 300 tons or more of choice honey every fall.

I canvassed every man at the convention, and got nearly every one to join the National Bee-Keepers' Association. While on my rounds through the Province I will canvass every bee-keeper to join the "Ontario Bee-Keepers' Exchange" and National Bee-Keepers' Association. WM. MCEVOY.

Ontario, Canada, Dec. 26.

Indigo for Stings.

Mr. W. S. Harris recommends tincture of arnica and tincture of myrrh for the sting of a bee. I have used indigo, and recommended it for others, and have not known it to fail to stop the pain almost instantly. It is good for any insect poisoning. F. M. KERR.

Crawford Co., Ohio.

Clipping Queens with Scissors.

I am wondering very much whether our Afterthinker holds queens differently from the way I hold them when he clips with scissors. He talks (page 42) as if the queen makes it her business to keep trying all the time to push the scissors away while the clipping is going on, and the clipping is done by a quick move on the part of the bee-keeper during one of the times when, for an instant, her feet are out of the way. There is nothing of that kind in this locality. The work is deliberately done on the part of the bee-keeper, and the clipping is done when the bee-keeper sees and *knows* that no foot is in possible danger. He cogitates that mathematically it can't be otherwise than that I have a lot of maimed queens this minute.

Now, look here Mr. Hasty, you keep inside your own domain. You're not to make wild speculations and guesses—you're to afterthink. And when you come to give a sober afterthought to the matter, you will hardly want to say that without my knowing it I have a lot of maimed queens just because you don't know how to clip with scissors.

Say, Mr. Hasty, come around with me at the time of spring overhauling, and if you can find a single queen that I have maimed by clipping, I'll—I'll—I don't know what I will do, but I believe I'd be willing to have you

To make cows pay, use Sharples Cream Separators Book Business Dairying & Cat.212 free. W. Chester, Pa

SWEET CLOVER

And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5lb	10lb	25lb	50lb
Sweet Clover (white).....	$ .75	$1.40	$3.25	$6.00
Sweet Clover (yellow)....	.90	1.70	4.00	7.50
Alsike Clover	1.00	1.80	4.25	8.00
White Clover	1.20	2.30	5.50	10.50
Alfalfa Clover	.80	1.40	3.25	6.00

Prices subject to market changes.

Single pound 5 cents more than the 5-pound rate, and 10 cents extra for postage and sack.

Add 25 cents to your order, for cartage, if wanted by freight, or 10 cents per pound if wanted by mail.

GEORGE W. YORK & CO.
144 & 146 Erie Street, CHICAGO, ILL

80 Days Free Trial.

Don't Pay Double.

We'll sell you a better hatcher for the money than any other incubator concern on earth. New improved regulator, that can't get out of order. Big book—200 illustrations free.
SURE HATCH INCUBATOR CO.,
Clay Center, Neb. or Columbus, Ohio.

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GREAT CROPS OF
STRAWBERRIES
And How to Grow Them.

The best book on strawberry growing ever written. It tells how to grow the biggest crops of big berries ever produced. The book is a treatise on **Plant Physiology**, and explains how to make plants bear **Big Berries and Lots of Them.** The only thoroughbred scientifically-grown **Strawberry Plants** to be had for spring planting. One of them is worth a dozen common scrub plants. They grow **BIG RED BERRIES.** The book is sent free to all readers of the American Bee Journal. Send your address to

R. M. KELLOGG, Three Rivers, Mich.
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POULTRY PAYS

when the hens lay. Keep them laying. For hatching and brooding use the best reasonable priced Incubators and Brooders — built upon honor, sold upon guarantee.
THE ORMAS
L. A. Banta, Ligonier, Indiana

Send for Free Catalog

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WE'D RATHER

people would say, "Page Fence costs more than others, and is worth more," than to have them say, "It isn't so good, but it costs less."
PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.

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Our line of sprayers and appliances fits every man's needs.
Hand, Knapsack, Bucket, Field, Barrel, and Power sprayers, twenty styles. Best nozzles made, attachments formulas etc. Select the useful and reliable. Catalog free.
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BOYS WE WANT WORKERS

Boys, Girls, old and young alike, make money working for us. We furnish capital to start you in business. Send us 10c stamps or silver for full instructions and a line of samples to work with. DRAPER PUBLISHING CO., Chicago, Ill.

Please mention Bee Journal when writing.

G. B. LEWIS CO., Watertown, Wis., U. S. A.
BEE-KEEPERS' SUPPLIES

1903 CATALOG READY.—If you have not received a copy annually, send us your name and address, and one will be mailed you FREE.

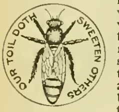
SPECIAL OFFERS.—On all cash orders received before April 1, 1903, we allow a discount of 2 percent.

To parties sending us an order for Supplies amounting to $10 00 or more, at regular prices, we will make the following low rates on Journals: Gleanings in Bee Culture (semi-monthly) 50c; American Bee Journal (weekly) 70c. List of Agencies mailed on application.

Please mention Bee Journal when writing.

A Celluloid Queen-Button is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-lapel. It often serves to introduce the subject of honey, and frequently leads to a sale.

NOTE.—One reader writes: "I have every reason to believe that it would be a very good idea for every bee keeper to wear one [of the buttons] as it will cause people to ask questions about the busy bee, and many a conversation thus started would wind up with the sale of more or less honey; at any rate it would give the bee-keeper a superior opportunity to enlighten many a person in regard to honey and bees.

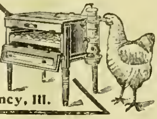

OUR TOIL DOTH SWEETEN OTHERS

The picture shown herewith is a reproduction of a motto queen-button that we are furnishing to bee-keepers. It has a pin on the underside to fasten it.

Price, by mail, 6 cents; two for 10 cents; or 6 for 25 cents. Send all orders to the office of the American Bee Journal.

If you want the Bee-Book
That covers the whole Apicultural Field more completely than any other published, send $1.20 to
Prof. A. J. Cook, Claremont, Cal.,
—FOR HIS—
"Bee-Keeper's Guide."
Liberal Discounts to the Trade.

$12.80 For 200 Egg INCUBATOR
Perfect in construction and action. Hatches every fertile egg. Write for catalog to-day.
GEO. H. STAHL, Quincy, Ill.



46A26t Please mention the Bee Journal.

IT IS A FACT
That our line of Bee-Keepers' Supplies are some of the best goods in the world, and that our system of dealing with our trade is not excelled by anybody. Plenty of testimony from satisfied customers proves these things. Write and get our suggestions, our catalog and our discounts for winter-time orders—ALL FREE.
The Largest Stock of Bee Keepers' Supplies in Indiana. C. M. SCOTT & CO.,
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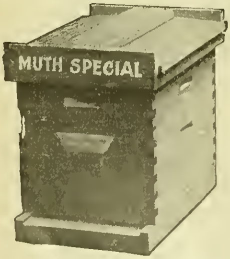
FREE Our handsome Garden Annual and Seed Catalogue. Send your address on a postal to-day, or for 4c. in stamps and the names of 3 neighbors who are actual seed buyers we will send our catalogue and packet of the Giant Red, Madam Perret PANSY SEED if you write before March 15th. Address,
COLE'S SEED STORE, Pella, Iowa.

SHEEP MONEY IS GOOD MONEY and easy to make if you work for us. We will start you in business and furnish the capital. Work light and easy. Send 10 cents for full line of samples and particulars.
DRAPER PUBLISHING CO., Chicago, Ills.

Dittmer's Foundation!
Retail and Wholesale.
This foundation is made by a process that produces the superior of any. It is the cleanest and purest. It has the brightest color and sweetest odor. It is the most transparent, because it has the thinnest base. It is tough and clear as crystal, and gives more sheets to the pound than any other make.

Working wax into Foundation for Cash a Specialty. Beeswax always wanted at highest price.

Catalog giving FULL LINE OF SUPPLIES with prices and samples, FREE on application.
GUS. DITTMER, Augusta, Wis.



Muth's Special the Best
Regulation dovetail with ⅞ Warp-Proof Cover and Bottom. Costs more, but sold at same price as regular.
☞ See special inducements in our 1903 Catalog.
THE FRED W. MUTH CO.
HONEY AND BEE-KEEPERS' SUPPLIES.
Front & Walnut Sts., CINCINNATI, OHIO.
Please mention Bee Journal when writing.

28 cents Cash paid for Beeswax.
This is a good time to send in your Beeswax. We are paying 28 cents a pound—CASH—for best yellow, upon its receipt, or 30 cents in trade. Impure wax not taken at any price.
Address as follows, very plainly,
GEORGE W. YORK & CO., 144 & 146 Erie St., Chicago, Ill.

Please Mention the Bee Journal when writing Advertisers *****

find a queen with all six feet gone, for the sake of having a chance to play with you for a day. C. C. MILLER.
McHenry Co., Ill.

Report for Season of 1902.

We had a poor honey crop here last season. I had 46 colonies last spring, in good condition. I got 600 pounds of extracted honey. 1050 pounds of comb honey, and inceased to 76 colonies, by natural swarming. They are all in good condition at present.

There was an abundance of white clover here last summer, but the weather was too wet and cold. I winter my bees in a cellar, under a workshop. It is 14 by 20 feet high, with good ventilation. It has a cement floor.
THEODORE REHORST.
Fond du Lac Co., Wis., Jan. 5.

Growing Ginseng.

It takes about 5 or 6 years for ginseng to mature for good, cultivated seed; then it is not full-grown, but it will do to market.
Wright Co., Minn. F. GENT.

A Farmer Bee-Keeper.

I started in bee-keeping with a box-hive colony which a neighbor gave me 7 years ago; since that time I have been working with bees, and with the help of the "Old Reliable" I have been able to make them pay me 3 times as much, for the amount invested in them, as any other property I have.

I am a farmer, and there are lots of bees in old Franklin county, but not much interest taken. Some are in box-hives, some in logs. I love my bees. I winter them on summer stands. I had 26 colonies, all in Langstroth hives, the spring of 1902; I increased to 49, and got 1,000 pounds of honey, which I sold for 10 cents per pound.

I now go all over the country transferring in Langstroth hives; I also rear some queens from the best queens that I got from the queen-breeders. M. H. SOSSAMANN.
Franklin Co., Ark., Dec. 28.

What is a Swarm?

There has been some controversy in the American Bee Journal in regard to "shook" or brushed swarms. Some claim they should be called brushed swarms, others "shook" swarms. I think it all depends upon whether they are shaken off the combs or brushed off. But why call them swarms? When is a colony of bees a swarm of bees? My idea heretofore has been that a colony of bees can only be call a swarm of bees when they are out of their hives and flying in the air—when they are swarming. As soon as the swarm clusters, or at least when they are hived, then they are no more a swarm, but a colony. Perhaps I am wrong, but if I am right then it is wrong to say a brushed swarm or a shook swarm. The one is a shook colony, and the other a brushed colony, and not a swarm at all.
Fulton Co., Ind. S. MORRETT.

Cotton-Waste for Smoker-Fuel—Shade-Boards.

Seeing so much lately in the Bee Journal about shade-boards and smoker-fuel, I thought I would tell what I consider the best smoker-fuel, and my plan of making shade-boards.

I have kept bees for several years, and am now nearly 78 years old. During my time I have used all kinds of rotten wood, planer-shavings, and all kinds of old rags. In the first place, I would say that rotten corn-cobs, well dried and pulverized, are better than any rotten wood; still, I have something that beats everything else I ever tried. It is what is called "waste." It is what the engineers and firemen use to clean their engines with. When it becomes saturated with oil they throw it away. When they stop for any length of time they generally clean up. My first experience with it was about eight years ago. I took a bunch of it and put it in the smoker, and since then I don't want any rotten wood. All you have to do is to take a bunch just large enough to fill the smoker, and just touch a match to it, and you are ready for business. You may set your smoker down, and when you pick it up it is all ready for business; it will not go out when once filled, and lasts nearly half a day.

As to shade-boards, I make them with shingles and strips, say 1x¾ inch, shingles only one thickness. As to size, any man can choose what suits him best. If it did not take so much time and space I would give my plan of putting them together.

Our honey crop in this part of Minnesota was not good. I commenced last spring with 60 colonies, and took about 250 pounds of comb honey. I put 91 colonies into winter quarters. E. B. HUFFMAN.

Winona Co., Minn., Jan. 2.

Bee-Keeping in Cuba.

The Gleanings in Bee-Culture's man "Rambler," and other Americans with bees in their bonnets, have invaded the western end of our beautiful Island, but I want to tell you this LaGloria Colony is rapidly branching out is the bee-industry.

We have had the preliminary meetings of bee-keepers, representing several hundred colonies of bees, looking to the formation of "The Eastern Cuba Bee-Keepers' Association." Our aim is to represent several thousand colonies of bees, and co-operate in knowledge. Then, too, we aim to join the National Bee-Keepers' Association, if permissible, and get in with the National commercial organization, if one is formed.

Our field for honey-production is good—royal and other palms, black mangroves, and many varieties of flowers through the woods.

Cuba, Dec. 6. DR. E. M. DAVIDSON.

Poorest Crop in 30 years.

Our last years' honey crop was one of the poorest in my 30 years' experience in bee-keeping. Some of my colonies began to starve by Sept. 1, consequently I fed all the bees in the month of September, and hope to get them through the winter all right. Prospects for next season are very good.

Johnson Co., Kans. M. ZAHNER.

Introducing Queens.

The past season was a very poor one here, very little comb honey.

As I have never seen it in print, I will tell the way I introduce a queen, and have never lost one by this way:

The next morning after the queen arrives I remove her from the colony I wish to introduce her, and wait until they get to the height of their excitement, as bees always are when their queen is lost. I then place two little sticks, ⅜x1 inch thick, just far enough apart so the cage of the queen comes in will a little more than reach, and set them on top of the frames, so the queen will not be over the space between two frames; and put an empty super on the hive, put on the cover, and leave the colony entirely alone for four days, so as to give the bees plenty of time to eat the candy out and release the queen.

If the bees should happen to start queen-cells you can wait two days and cut them out, unless you want your bees to swarm.

Sometimes a queen will arrive in a feeble condition, or daubed all over, and then instead of waiting for the bees to eat out the candy I release her myself as soon as the bees are very uneasy from the loss of a queen, with the result that I have always found them safe and sound. FRANK S. DEGROFF.

St. Lawrence Co., N. Y., Dec. 29.

The Blight Question—Sowing for Bees.

In Prof. Cook's article, page 22, he strikes the nail on the head (as he usually does), when he says: "All must combine, and all will combine, as ever the right comes uppermost, and ever is justice done." I am strictly a lay member, but would be pleased to be kept in the straight and narrow path.

While not agreeing with the California fellows on the blight question, and while not ad-

SPARK'S EARLIANA

Most profitable tomato ever grown. One Trucker cleared $6000. Many others in proportion. For history of this and other

Money Making Novelties in Seeds.

See our *Garden and Farm Manual* for 1903. Most complete and practical Seed Catalogue Published. Sent free to Seed Buyers. Write at once to

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217-219 Market St., Philadelphia, Pa.

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Headquarters FOR Bee-Supplies

Root's Goods at Root's Factory Prices.

Complete stock for 1903 now on hand. Freight rates from Cincinnati are the lowest. Prompt service is what I practice. Satisfaction guaranteed. Langstroth Portico Hives and Standard Honey-Jars at lowest prices.

You will save money buying from me. Catalog mailed free. Send for same.

Book orders for Golden Italians, Red Clover and Carniolan Queens; for prices refer to my catalog.

C. H. W. WEBER,

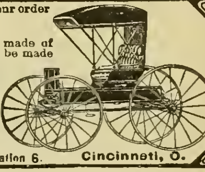
Office and Salesrooms—2146-48 Central Ave.
Warehouses—Freeman and Central Aves.
CINCINNATI, OHIO.

ORDER EARLY

If you want to get a new buggy and want to have it made to your order you should send for the mammoth catalogue of our SPLIT HICKORY VEHICLES at once. It will tell you about our 100 exclusive styles of vehicles made of second growth Split Hickory—split, not sawed—any of which will be made as you want it and sent you on 30 DAYS' FREE TRIAL returnable after trial if not just as you expected. We have satisfied thousands and can satisfy you.

Our SPLIT HICKORY SPECIAL at $47.50 is the biggest buggy bargain in the world. Described in full in our catalogue. Send for that catalogue before you lay down this paper.

OHIO CARRIAGE MFG. CO., Station 6. Cincinnati, O.



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BARGAINS IN SEEDS

Choice kinds of Vegetable and Flower Seeds at 2 cents per Packet. Flower Plants, 5 cents each. Many choice novelties. Don't buy until you see our New Catalogue. Mailed FREE if you mention this paper.
IOWA SEED CO., DES MOINES, IOWA.

$5 TO START YOU IN BUSINESS

We will present you with the first $5 you take in to start you in a good paying business. Send 10 cents for full line of samples and directions how to begin.
DRAPER PUBLISHING CO., Chicago, Ills

LEAHY MFG. CO
WARE HOUSE

......FOR THE BEST......
HIVES, SMOKERS, EXTRACTORS, FOUNDATION
....AND ALL....
BEE-KEEPERS' SUPPLIES,

Address, LEAHY MFG. CO.

Higginsville, Mo.
1730 S. 13th Street, Omaha, Neb.
2415 Ernest Ave., Alta Sita, East St. Louis, Ill.

Please Mention the Bee Journal when writing Advertisers *****

Here is a Hummer!

We want 1000 subscribers among the readers of the American Bee Journal.

The Modern Farmer and Busy Bee	$ .50
The Horticultural Visitor	.50
The American Poultry Journal	.50
	$1.50

All for 50 cents.

"The Horticultural Visitor" is among the best of the fruit-papers published.
"The American Poultry Journal" is one of the oldest and best of its kind.
"The Modern Farmer,"—well, we will let that speak for itself.

Gleanings, The Modern Farmer, and either of the above—one year—$1.00.

This ad. will not appear again. Do it quick, if you want a bargain. Address,

THE MODERN FARMER, St. Joseph, Mo.

A FRIEND
to poultrymen—to chickens.

Adam's GREEN BONE Cutter

It runs easily because it has ball bearings. It cuts clean, quickly and perfecly. Makes a fine bone shaving such as chickens require. Before you buy send for free catalogue No. 9

W. J. ADAM, JOLIET, ILL.

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WE INVITE all readers of the AMERICAN BEE JOURNAL who seek a college for themselves or friends to investigate

Mount Union College

Our motto in all departments is "Maximum efficiency at minimum cost."

Our scholastic training is equal to the best, our reputation first-class. All expenses for a year, aside from the clothing and traveling, less than $200.00. Co-education, health conditions, moral and religious influence, superior.

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MOUNT UNION COLLEGE,
Alliance, Ohio.

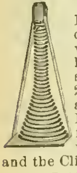
DAIRYMEN ARE DELIGHTED

to meet those who work for us. Cow keepers always have money. We start you in business. You make large profits. Easy work. We furnish capital. Send 10 cents for full line of samples and particulars.

DRAPER PUBLISHING CO., Chicago, Ills.

Field-Note.—All farmers and everyone who has a garden will be interested in the new catalog just issued by the Iowa Seed Co., of Des Moines, Iowa. It is the largest and most complete book of this kind every published by any seed-firm west of the Mississippi, which, as our readers are doubtless aware, is the great seed-growing section of the United States. This firm claims now to stand first in their line among Twenty Million people, and they make a specialty of supplying the best quality of Seed Corn and other farm and garden seeds direct from the grower to the user. Catalog will be mailed free on request. Please mention the American Bee Journal when writing.

Queen-Clipping Device Free!



The MONETTE Queen-Clipping Device is a fine thing for use in catching and clipping Queens' wings. It is used by many bee-keepers. Full printed directions sent with each one. We mail it for 25 cents; or will send it **FREE** as a premium for sending us **One New** subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device. Address,

GEORGE W. YORK & CO.,
144 & 146 E. Erie St., - CHICAGO, ILL.

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Tip-Top Glass Honey-Jars

The picture shown herewith represents the best one-pound jar for honey that we know of. It is made of the clearest flint glass, and when filled with honey, and a neat label attached, it makes as handsome a package as can be imagined. Its glass top sets on a flat rubber ring, and is held in place by a flat steel spring across the top as shown in the picture. It is practically air-tight, thus permitting no leak, which is an important thing with honey-sellers.

We can furnish these jars, f.o.b. Chicago, at these prices: One gross, $5.00; two gross, $4.7‾ a gross; five or more gross $4.50 per gros

If ɩu try them once you will likely use no other ‹ind of top or sealing arrangement for honey ars.

GEORGE W. YORK & CO.
144 & 146 Erie Street, - CHICAGO, ILL.

The White Mfg. Co.

wants to sell you your Supplies. Send for their Catalog and Price-List of BEE-KEEPERS' SUPPLIES, **free.** Best goods for best prices. Address,

THE WHITE MFG. CO.
3A4t BLOSSOM, Lamar Co., TEX.

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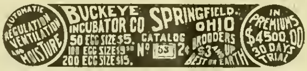

"Bees in Colorado"

I still have several hundred copies of the souvenir with the above title. The bee-papers and a good many people without visible axes to grind have said it is a valuable and attractive thing. If you should like to have a copy, send me a silver dime or 5 two-cent stamps, and I will mail you a copy.

"BEES IN COLORADO" is the title of a 48-page and cover pamphlet gotten up to boom the Denver convention. Its author is D. W. Working, the alert secretary of the Colorado State Bee-Keepers' Association. It is beautifully illustrated, and printed on enameled paper. It is a credit to Mr. Working, and will be a great help in acquainting those outside of Colorado with the bee and honey characteristics and opportunites of that State.—American Bee Journal.

D. W. WORKING, Box 432, Denver, Colo.
Please mention Bee Journal when writing.

vancing any cure for blight, I once happened to live one summer where there were no bees, but in a district where nearly everything in fruit line blighted, especially in the varieties of pear and apple, and it was all kinds, too—tree, limb and twig, also fruit-blight—and it was impossible for it to have been done by inoculation by bees or insects, especially the twig and fruit, as one day they were all green, thrifty and growing, the next day blighted, shriveled and brown by evening. The people called it "electric blight," claiming there was no blight there until the telegraph and telephone lines were stretched through their district.

As I feel a little critical, I noticed another article by J. E. Johnson, of Knox Co., Ill., who claims he has an orchard of 900 trees and no blight. Now, whether that is not a smooth way of securing an "ad," I am not sure, as after the assertion he leaves the subject. I would prefer that he would get the affidavits of some disinterested neighbors to that affect, and then give us the formula or peculiar method of cultivation, *i.e.*, if he wishes to be a great public benefactor. The seed-sowing part of his article is all right, provided there is waste or uncultivated lands to scatter seeds on, but when we use good, tillable land for raising bee-pasturage only, I am afraid it will hardly pay, while all kinds of blooming crops give two dividends. I find that turnip is a fine honey-plant, blooms at a season just after fruit-bloom, and the bees literally cover it from morning till dewy eve. If florists in their "ads" and circulars would always say whether or not certain flowers were honey-secreting, they would secure many sales from apiarists that at present they do not.

There are the "Sisters" that call a fellow an "Old Drone." Not being a bachelor, this probably is admissible, but suppose a fellow is not "old," and more, if there is another insect that really deserves sympathy more than the drone-bee, I am not acquainted with it. In the first place, Mr. Drone-Bee is fed on the fat of the land, groomed and kept sleek, not allowed to wait on himself, hovers the brood in cool nights and after a time of elegant leisure is pounced upon and ruthlessly driven from his own home to starve. Just think of it! W. S. MITCHELL.

Cherokee Nation, Ind. Ter.

Feeding Bees—Dividing or Shaking.

I thought I might write how I fed the bees 200 pounds of sugar. I fixed up some feeders with floaters in them that gave me far better results than the Miller feeder.

I keep the mice out of my cellar by the use of poison and traps.

I have practiced dividing my bees for 15 years; I suppose every large bee-keeper does this. I always run out-apiaries by the shaken or dividing plan.

I took all the honey from my bees last fall and fed sugar syrup. I have sold nearly all my comb honey, for the last two years, as chunk honey, cut it up and put it in Mason jars, and then filled up with extracted honey. I find ready sale for this kind of a package. I found a way to keep the honey from granulating in the jar. Put in just a little tartaric acid. I do not see that it hurts the honey. What do you think? C. J. BARBER.

Mouona Co., Iowa.

New and Old Things in Beedom.

When will there cease to be something new in the bee-keeping line? I've been puzzling my brain over that fellow, who came over from Canada, "by letter," to have a talk with Mr. Doolittle. How that could be done, "by letter," and have the questions and answers in such consecutive order, and have them so interwoven together—first one asking a question and then the other; and each answering the other's question—is more than I can get through my stupid noddle. If a 'phone were used, it is easy to understand it; or, if wireless telegraphy were brought into requisition we might comprehend it; but the other thing beats me. It is worse than the 13-14-15 puzzle. I give it up.

Not only something new, but *old things*—matters we might suppose were buried out of sight—bob up, like Banquo's ghost, to annoy us, and get us "all by the ears" again. Now, it's the color of what we wear in the bee-yard. I'll be careful to "sing low," for I don't want any hair-pulling—have but a few stray locks left, and prize them highly. Have always worn black—or nearly always—but not of the rough, woolly texture. Usually have a pair of black-silk stocking legs drawn over my shirt-sleeves, to keep them from being soiled as I work in the hive. Never have experienced any inconvenience on account of annoyance of the bees by so doing. Perhaps my bees were better-natured than some others. Often roll up my sleeves to my elbows, go down to the very bottom of the hive of a strong colony without a sting; never wear gloves.

Have seen bees alight all over a person wearing light-colored fuzzy garments, but when exchanged for something smooth, it seemed to take all the fight out of them. You know, a cross bee will make a *bee-line* for one's eyes if she can get there, but if the eyes are protected, will get as near as she can. How she will buzz around, peeping through your veil from side to side, hoping to find a place to dart through!

There is a reflection of light from the eye, as we always see in the photograph. The bees are attracted by it; or they seem to know that there is the vulnerable point for attack. The head of the "hat-pin," which has been recently referred to, has just such a point of reflection, seen from any point of view, and becomes an attractive object for investigation. I think it would make no difference whether the head of the pin was white or black, red, green or blue. Wearing this hat-pin is a new idea. Think I'll stick a couple or so in the top of my old bee-hat for the bees to play with.

There is another thing that has attracted my attention not a little since commencing the study of the honey-bee, and that is a kind of miller, differing materially from the moth-miller which we often see infesting the hive of bees. Hear of them occasionally as being among colonies of bees and comb honey, but in all my experience, have never found so many as this year. Have found more than I ever saw in any old box-hive of black bees. They seem to do no particular harm. Who can give us any light on the subject?

Walworth Co., Wis. WM. M. WHITNEY.

CONVENTION NOTICES.

Wisconsin.—The Wisconsin State Bee-Keepers' Association will meet Feb. 4 and 5, in Madison, Wis. Special program prepared. Excursion railroad rates and special hotel rates secured. N. E. FRANCE, Pres.

New York.—The annual meeting of the Oswego County Bee-Keepers' Association will be held at Fulton, N. Y., Saturday, March 7, 1903. Prof. Frank Benton will be present and address the meeting. An interesting program is being prepared, and all persons interested in bees are cordially invited to be present.

MORTIMER STEVENS, Pres.
CHAS. B. ALLEN, Sec.

Michigan.—The Michigan State Bee-Keepers' Association will hold its annual convention Feb. 3 and 4, 1903, in the Council Rooms of the City Hall, at Lansing. The rooms are in the third story, back away from the noise of the street, yet they can be reached by the elevator.

Arrangements have been made at a nice, clean hotel, the Wentworth House, only two blocks from the place of meeting, where bee-keepers will be accommodated at $1.50 a day.

The Michigan State Dairymen will hold their convention at the Agricultural College, Lansing, on the same dates, as also will the State Veterinaries, thus enabling the members of all three societies to come at reduced rates. When buying your ticket you will pay full fare, and ask for a certificate "on account of Michigan Dairymen's Convention," as the secretary of this convention is to sign the certificates for all three of the conventions. This certificate will enable you to go back at one-third fare.

The first session will be on the evening of the 3rd, when E. R. Root will show us "Bee-Keeping from the Atlantic to the Pacific, as seen through the Camera and Stereopticon." This will consist of portraits of distinguished bee-keepers, of apiaries, hives, implements, methods, etc., all fully explained. A more enjoyable entertainment for a bee-keeper can not be imagined.

Mr. C. A. Huff, who has been experimenting the past season with formalin for curing foul brood, has promised to be present. Messrs. Soper and Aspinwall are not far away, and will probably be present. Mr. Aspinwall has kept about 70 colonies for the past 10 years, without losing a colony in winter. He can tell us how he has prevented this loss; also how he prevents swarming. Mr. T. F. Bingham, who has been so successful wintering bees in a cellar built like a cistern, is also expected. Messrs. A. D. D. Wood and J. H. Larrabee will help to make the meeting a success.

This is the first time that the convention has been held in the Southern part of the State in several years; let us turn out and show our appreciation of the event.

W. Z. HUTCHINSON, Pres.

1-lb Keystone
...Honey-Jars

These are clear flint glass jars holding just one pound, and the shape of a keystone. They are 7⅛ inches high, and very pretty when filled with honey. The corks can be sunk a trifle below the top, and then fill in with beeswax, sealingwax or paraffin. We can furnish them in single gross lots, with corks, f.o.b. Chicago, at $3.50; two gross, $3.25 per gross; or five or more gross, at $3.00 a gross. These are the cheapest glass one-pound jars we know anything about. We have only a few gross of them left. So speak quick if you want them. Address,

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The Greider Strains, fifty of them, are bred to make prize winners. Very low prices on birds and eggs, considering quality. Elegant 1903 catalogue sent postpaid for 10 cents. Write to-day.
B. H. GREIDER, RHEEMS, PA.
Please mention Bee Journal when writing.

Honey For Sale.

2000 lbs. Basswood Extracted honey, at 9c a pound. All in 60-lb. cans. Warranted PURE HONEY. JOHN WAGNER, BUENA VISTA, ILL.
5Atf Please mention the Bee Journal.

Prevent Honey Candying
Sent free to all.
HENRY ALLEY, Wenham, Mass.
51Atf Please mention the Bee Journal.

"What Happened to Ted"
BY ISABELLE HORTON.

This is a true story of the poor and unfortunate in city life. Miss Horton, the author, is a deaconess whose experiences among the city poverty stricken are both interesting and sad. This particular short story—60 pages, 5x6¾ inches, bound in paper cover—gives somewhat of an insight into a little of the hard lot of the poor. Price, postpaid, only 10 cents (stamps or silver.) Address,

ISABELLE HORTON,
227 EAST OHIO STREET, CHICAGO, ILL.

The Emerson Binder

This Emerson stiff-board Binder with cloth back for the American Bee Journal we mail for but 60 cents; or we will send it with the Bee Journal for one year—both for only $1.40. It is a fine thing to preserve the copies of the Journal as fast as they are received. If you have this "Emerson" no further binding is necessary.

GEORGE W. YORK & CO.,
144 & 146 Erie Street, CHICAGO, ILL.

HONEY AND BEESWAX
MARKET QUOTATIONS.

CHICAGO, Jan 9.—The demand is not more than usual; hence stocks are sufficient, especially as Cuba has now comb honey on this market. This is a new source of supply, and is a factor that must be reckoned with, as it obviates the necessity of laying in a stock during the summer and autumn to draw from in the winter and spring months. The best grades of white comb sell at 15@16c per pound, with travel-stained and light amber, 13@14c; darker grades, 10@12. Extracted, 7@8c for white, and 6@7c for ambers. Beeswax steady at 30c.
R. A. BURNETT & Co.

ALBANY, N. Y., Jan. 7.—Honey demand and receipts light. We quote white comb, 15 cents; mixed, 14c; buckwheat, 13@14c. Extracted, white, 7@7½c; dark and buckwheat, 7@7½c. More demand for buckwheat than any other here. H. R. WRIGHT.

KANSAS CITY, Dec. 20.—Market steady at quotations. We quote fancy white comb, per case, 24 sections, $3.50; No. 1 at $3.40; No. 2 white and amber, $3.25. Extracted, white, per pound, 7@7½c; amber, 6@6½c. Beeswax, 27@30c.
C. C. CLEMONS & Co.

CINCINNATI, Jan. 7—The demand for all kinds of honey has fallen off considerably in the last few weeks, owing to the many other sweets offered at this season of the year. Lower prices are no inducement to increase the consumption, as the demand is not there, and will not be until about the end of the month; consequently it is folly to offer at lower prices. We quote amber extracted in barrels at 5¾@6½c; white clover and basswood, 8@9½c. Fancy white comb honey, 16@17c; lower grades hard to sell at any price. Beeswax firm at 29@30c.
THE FRED W. MUTH Co.

NEW YORK, Dec. 23.—The market on comb honey is dull and inactive. While the supply is not large the demand has fallen off to a large extent and prices show a weakening tendency. We quote fancy white at 15c; No. 1, 14c; No. 2, 13c; and buckwheat at from 10@12c. Extracted is in fairly good demand; white. 7½c; light amber, 6½@7c; dark, 5½@6c. Beeswax firm at from 28@29c. HILDRETH & SEGELKEN.

CINCINNATI, Jan. 20.—The demand for comb honey has fallen off, which in general happens right after the holidays, although prices rule as before: White clover, 15½c; extra fancy water-white, 16c; no demand for lower grades. Extracted honey is in fair demand, and sells as follows: Amber, in barrels, 5¼@5½c; in cans, 6c; alfalfa, 7½c; white clover, 7½@8½c. Beeswax, 28@30c. C. H. W. WEBER.

SAN FRANCISCO, Jan. 14.—White comb honey, 11½@12½c; light amber, 10@11c; dark, 5@6½c. Extracted, white, 6@6½c; light amber, 5@5¼c; amber, 4@4½c. Beeswax, good to choice, light, 26@27½c; strictly fancy light, 29@30c.

The country merchant, representative of trade interests, estimates "entire stock of honey of 1902 in the State at 15 cars," worth 5¾@6c per pound at primary points, subject to a $1.10 freight-rate to the East.

WANTED WHITE CLOVER EXTRACTED HONEY!
Send sample and best price delivered here; also Fancy Comb wanted in no-drip cases.
THE FRED W. MUTH CO.
32Atf Front and Walnut, CINCINNATI, OHIO.

Hives, Sections, Foundation,
etc. We can save you money. Send list of goods wanted and let us quote you prices. ROOT'S GOODS ONLY. Send for Catalog.
M. H. HUNT & SON, Bell Branch, Mich.

BINGHAM'S PATENT Smokers
25 years the best.
Send for Circular.
25Atf T. F. BINGHAM, Farwell, Mich
Please mention Bee Journal when writing.

$300,000,000.00 A YEAR
and you may have part of it if you work for us. Uncle Sam's poultry product pays that sum. Send 10c for samples and particulars. We furnish capital to start you in business. Draper Publishing Co., Chicago, Ill.

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BEE-KEEPERS,
Save Money by Buying
Hives, Sections, Brood Frames, Extractors, Smokers, AND EVERYTHING ELSE YOU NEED, OF

THE W. T. FALCONER MFG. CO.,
Jamestown, N. Y.

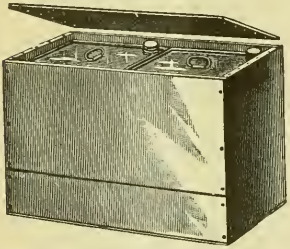
☞ Our goods are guaranteed of superior quality in every way.
Send for our large illustrated catalog, and copy of

THE AMERICAN BEE-KEEPER,
a monthly for all bee-keepers; 50c a year. (Now in 12th year. H. E. HILL, Editor.)

☞ W. M. GERRISH, E. Nottingham, N. H., carries a full line of our goods at catalog prices. Order of him and save freight.

Please mention Bee Journal when writing.

ANOTHER CARLOAD
OF THAT FINE
White Alfalfa Honey
ALL IN 60-LB. CANS



A sample by mail, 10c for package and postage. By freight, f.o.b. Chicago: 1 box of 2 cans (120 lbs.) at 8½c a pound; 2 boxes or more (4 or more cans), at 8c a pound. We can furnish Basswood Honey at ½c a pound more. (These prices are for selling again).

This Alfalfa Honey should go off like hot-cakes. Better order at once, and get a good supply for your customers.

GEORGE W. YORK & CO.,
144 & 146 E. Erie Street, - CHICAGO, ILL.

BEE-SUPPLIES!
ROOT'S GOODS AT ROOT'S PRICES.
Everything used by bee-keepers.
POUDER'S HONEY-JARS. Prompt service. Low Freight Rates.
NEW CATALOG FREE.
WALTER S. POUDER.
512 MASS. AVE. — INDIANAPOLIS, IND.

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The Pacific Rural Press,
The leading Horticultural and Agricultural paper of the Pacific Coast. Published weekly, handsomely illustrated, $2.00 per annum. Sample copy free.

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330 Market Street, - SAN FRANCISCO, CAL.

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Why does it sell so well? Because it has always given better satisfaction than any other. Because in 25 years there have not been any complaints, but thousands of compliments.

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Bee-Keepers' Supplies OF ALL KINDS *****

Very fine pure-bred BARRED PLYMOUTH ROCK Chickens and Eggs for sale at very low prices.

Langstroth on the Honey-Bee—Revised,
The classic in Bee-Culture—Price, $1.20, by mail.

BEESWAX WANTED at all times.

DADANT & SON,
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"FACTS."

ROOT'S CATALOG NOW READY. It is a fact that Root's catalog for 1903, the 92nd edition, contains information valuable to *every* bee-keeper, whether he has one colony or a thousand colonies. The catalog is ready for mailing, and will be sent free to all applicants. If you will give us the names and addresses of ten or more bee-keepers, we will send you in addition our 40-page semi-monthly journal, *Gleanings in Bee-Culture*, for three months free.

Root's Extractors. It's a fact that **Roots Cowan Honey-Extractors** are acknowledged by far the best extractors on the market. You will make a mistake if you take one represented to be "just as good." Our designs are the best, we use the best material, and our workmanship is unsurpassed. Insist on Root's Cowan.

Danz. Hive. It is a "Fact" that the **Danzenbaker Hive** for Comb Honey, is acknowledged by **all** who have given it a fair trial the best hive for comb honey.

Gives Best Yields. It is a fact that bee-keepers using the Danz. hive get better yields from this hive than any other hives in their yards.

Higher Price for Honey. It is also a fact that the honey in Danz. Sections generally sells for a higher price, and always finds a ready market. We have yet to learn of a bee-keeper having comb honey in Danz. sections who had to hold his honey because of a dull market.

Agencies. It is a fact that Root's Goods are in demand everywhere. For this reason we have agencies all over the United States and upward of twenty-five foreign countries. A full list of agents sent on application.

Low Freight, Quick Delivery It is a fact that we are able by these agencies to furnish our goods quickly, and at a low cost for transportation.

Facts About Bees. "Facts About Bees," 8th edition, revised, is now ready. Full of information, and sent to any address for a 2c stamp, or free if you mention this paper.

THE A. I. ROOT CO., Medina, Ohio, U.S.A.

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Wax-Presses vs. Sun-Extractors.
H. H. ROOT.

The Ontario Honey Exchange.
W. A. CHRYSLER.

AMERICAN BEE JOURNAL

43d Year. CHICAGO, ILL., FEB. 5, 1903. No. 6.

WEEKLY

MR. J. S. BARB AND APIARY, OF TRUMBULL CO., OHIO.
(See page 84.)

THE AMERICAN BEE JOURNAL.

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DEPT. EDITORS,
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IMPORTANT NOTICES.

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The Wrapper-Label Date of this paper indicates the end of the month to which your subscription is paid. For instance, "dec03" on your label shows that it is paid to the end of December, 1903.

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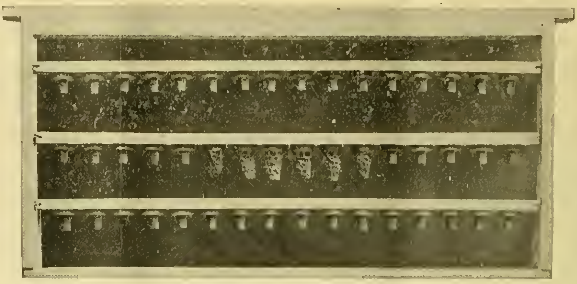
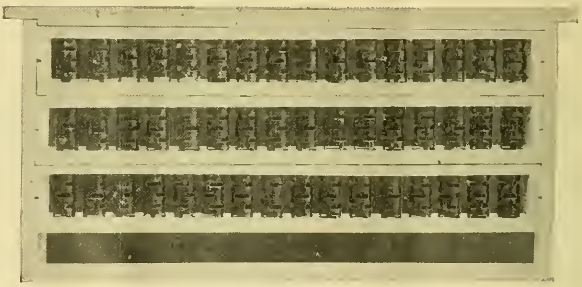


CELL-CUPS AND FINISHED CELLS.



CAGES OF QUEEN EXCLUDING METAL.

Stanley Queen Incubator and Brooder

An Arrangement that Allows the Bees Access to the Cells and Queens at all Times.

(Patent Applied for.)

One of the greatest objections urged against a lamp-nursery, or any kind of a nursery where bees are hatched away from the bees, is that the cells and their inmates are robbed of the actual care of the bees. When the bees have access to a cell, and the time approaches for the queen to emerge, the wax over the point is pared, and, as the queen cuts an opening through the cell, and thrusts out her tongue, she is fed and cheered in her efforts to leave the cell. A queen hatched away from the bees loses all of this food, cheer, and comradeship; and, until introduced to a nucleus, or full colony, has not the natural food that she would secure were she among the bees.

All of these objections are overcome by an invention of Mr. Arthur Stanley, of Lee Co., Ills. Mr. Stanley makes the cell-cups according to the directions given in Mr. Doolittle's "Scientific Queen-Rearing," sticking the base of each cell to a No. 12 gun-wad. By the use of melted wax these wads, with the cell attached, are stuck, at proper intervals, to a strip of wood exactly the length of the inside width of a Langstroth brood-frame. Two wire staples driven into the inside of each end-bar, slide into slots cut in the ends of the cell-bars, and hold them in position.

The process of transferring larvæ to the cells, getting the cells built, etc., have all been described in the books and journals, and need not be repeated here. When the cells are sealed they may be picked off the bar (still attached to the gun-wads); and right here is where the special features of the Stanley process steps in. Each cell, as it is removed, is slipped into a little cylindrical cage, made of queen-excluding zinc, the cage being about two inches long, and of such a diameter that the gun-wad fits snugly, thus holding the cell in place and stopping up the end of the cage. The other end of the cage is plugged up with a gun-wad. Long rows of these cages, filled with sealed cells, are placed between two wooden strips that fit in between the end-bars of a Langstroth frame are held in position by wire staples that fit into slots cut in the ends of the strips. To hold the cages in their places, holes, a trifle larger than the diameter of the cage, are bored, at proper intervals, through the upper strip, thus allowing the cages to be slipped down through the upper bar, until their lower ends rest in corresponding holes bored part way through the lower bar.

A frame full of these cages, stocked with cells, may be hung in a queenless colony, and will require no attention whatever except to remove the queens as they are needed. The workers can freely pass into and through the cages, cluster upon the cells, care for them, and feed the queens after they hatch, exactly as well as though the queens were uncaged.

These cages are unsurpassed as introducing cages, either for fertile or for virgin queens. The bees are not inclined to attack a queen in a cage to which they can enter, yet they can surround, caress, and feed her. They can become acquainted with her, and give her the same scent as themselves. When desirable to release her, one end of the cage can be stopped with candy, and the bees allowed to liberate her by eating it out.

By putting food in one end of the cage, a queen may be kept caged, away from the bees, the same as in any other cage.

Price, $5.00, by Express, Or with the American Bee Journal one year—both for $5.50.

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Send all orders to **GEORGE W. YORK & CO.,**
144 & 146 E. Erie Street, CHICAGO, ILL.

ESTABLISHT IN 1861
AMERICAN BEE JOURNAL
THE OLDEST BEE-PAPER IN AMERICA

43d YEAR. CHICAGO, ILL., FEB. 5, 1903. No. 6.

Editorial.

Bee-Keeping in Illinois.—The following concerning the value and importance of the bee, honey and beeswax industry of the State of Illinois, is taken from the United States census report for 1900:

Number of bee-farms or apiaries.	34,932
" colonies of bees......	179,953
" pounds of honey.....	2,961,080
" " beeswax..	75,290
Value of honey and beeswax....	$343,200

In the order of largest amount of honey produced by States, Illinois is 5th. Texas takes the lead, except in average number of pounds per colony, and in this Arizona is first.

Surely, with such a showing as Illinois is able to make, her bee-industry deserves recognition at the hands of the Legislature, by way of an anti-foul-brood law, which should be passed this winter. It will not do for Illinois to be the last in the list of progressive States in this regard. Already Wisconsin, Colorado, California and Michigan are ahead.

◆

Bee-Keeping in the South is, in its leading features, the same as in the North. The natural history of the honey-bee and its habits are the same everywhere. Yet there are differences due to locality that can not be ignored except at a loss. Wintering in the South scarcely needs a thought; in the North it is a perplexing study; and if the attention be closely given to this and some other differing points, one is likely to imagine a greater difference than really exists between the two regions. This leads a correspondent from the South, while greatly appreciating the value of the American Bee Journal, to say:

> "I am somewhat disappointed in not seeing anything from this section, or anywhere near us at all. Our climate and conditions are very different from those described by most of your writers. I am only a beginner, and therefore not able to write for old veterans, or I would try now and then. Can't you stir up some of the Southerners?"

This journal, as its name implies, is not sectional. It is intended for the whole country. If our correspondent will go through the different numbers of the American Bee Journal for the past year, and cross out all matter not applicable to his section of country, he will probably be surprised to find how little will be crossed out, and what a large mass of useful reading he will have left.

Moreover, it is largely what its subscribers make it. If one part of the country sends in more contributions than another, it is mainly because the contributors so will it. Neither is our correspondent alone in finding no contributions from any one within easy hailing distance. This is a country of a good many square miles, and correspondents are well scattered. Many a reader at the North can also say, "I find no writer from anywhere near us at all."

Our correspondent, and others like him, may help the matter by putting aside their modesty and sending in contributions themselves, telling of their experiences and their wants, and they will probably find that nothing will more quickly draw out others situated in like conditions, so that they will not have long to complain of hearing from no one "anywhere near us at all."

◆

Insects and Plant Diseases.—At the Universal Exposition to be held in St. Louis in 1904, under the classification of Useful Insects and Their Products, Injurious Insects and Plant Diseases, there will be installed in the Agriculture Palace displays as follows:

Systematic collections of useful and injurious insects.

Bees. Silkworms and other bombycids. Cochineal insects.

Systematic collections of vegetable parasites of plants and animals.

Appliances for rearing and keeping bees and silkworms. Their products—honey, wax, cocoons.

Appliances and processes for destroying plant-diseases and injurious insects.

There will be no charge for space occupied by such exhibits, and a limited amount of power for the operation of mechanical devices to illustrate processes of special interest will be furnished to exhibitors without charge.

◆

Producer's Name on Honey.—We have received the following from Mr. P. D. Jones, of Livingston Co., N. Y.:

EDITOR YORK:—Will you allow me a small space in the American Bee Journal to say a few words on your comments on marking honey-cases, on page 627 (1902)?

You say that you received a nice lot of honey with the producer's name on each section and case, and that you scraped off all the marks, and put on your own name. Now, I ask, Was that act an honest one? I say no. You robbed that producer of the honor and credit of producing and shipping a fine crop of honey, and took all the credit yourself. His address on his cases was to let dealers know where to find honey that was all right, and well put up for the market, so that next season there might be others that would want to deal with him, and it would make competition for his honey, and a better price, which means more money for his honey.

You say that it is not a safe rule to put your name on comb honey. Why not? I have kept bees and sold honey for 55 years, and I have never been hurt yet. I have no trouble in getting rid of my honey, and my name is on every case that I ship.

You say that you have worked up a demand for "York's Honey," and not Smith's, or Miller's, or Nelson's. But how did you do it? You bought some very nice honey that some one had taken a great deal of pains to produce, and put up in very fine style, and scraped off his name and put on your own, and palmed it off as your own production. Now, is that right? I say no. Had I ever sold you honey and learned that you scraped off my name and substituted yours in its place, I am certain that our dealings would have ended right then and there.

If the commission merchant wishes his address on the honey he buys, let him send his stencil-plate to the seller and ask him to use it on the cases, and not object to the producer's name being on at the same time; his wishes will be granted without fail.

You say that you have a right to put your name on if you are willing to stand responsible for its purity. What an idea! Did you ever buy any comb honey that was adulterated? If you have, and get any more, please send me some at my expense.

Some persons are ever ready to criticise others, but do not like to take the medicine themselves. P. D. JONES.

We do not expect to buy any honey of Mr. Jones—wouldn't take it as a gift, if we were compelled to keep his name on it. We are not quite so foolish as to keep the producer's name on any honey we offer for sale, for Jones, nor Smith, nor several other producers would each produce all we sell during a season. And we don't care to have grocers ask us for more of Smith's honey, and be compelled to tell them we are out of it, when we have a lot more on hand from several other bee-keepers that we know is just as good, if not better than Smith's.

It is all right for Jones to put his name on his honey if *he* is retailing it *himself*, or selling directly to grocers, but *we* wouldn't care to have his nor anybody else's honey with name of producer on it.

We never say on our labels that we are the producers of the honey we sell, not even if it is really from our own apiary. That isn't necessary at all.

We hope that on the next wheat, or corn, or potatoes, or hogs, Mr. Jones produces and sells he will be sure to put his name—he should brand the hogs, see that his name is on every grain of the wheat, on every ear of corn, and on every potato! Any one can see the ridiculousness of all this.

We have spent hundreds of dollars in working up a demand for "York's Honey," and not that of Jones, Smith, or even Yon Yonson. And our conscience is as clear as a bell on this subject, too.

◆

Bees Carrying Pollen.—Do bees use judgment in carrying pollen? In some cases, perhaps in some places, bees carry in more pollen than in others. Some complain that more is stored than is needed. Possibly this may not be true in every case where it is suspected. In spring a large amount of pollen is used to carry on brood-rearing, and if a stock of it had not been stored up in the previous summer the amount of brood reared might be curtailed. It is an interesting question to know whether the bees use enough judgment to let up on gathering pollen when they have a large stock on hand, or whether, like honey, it is gathered at all times when it can be had, whether the stock on hand be large or small.

One way to help decide the matter would be to take from a colony that had been queenless a long time all its combs of pollen and give them to a colony with a laying queen. Then, if the bees use any judgment in the matter, the bees with the laying queen might lessen their pollen-gathering and the queenless colony increase it, unless there is something in the nature of the case that makes old bees cease to gather pollen.

Weekly Budget.

The National Association.—We have received the following announcement from Pres. Hutchinson, giving the result of the election held by the National Bee-Keepers' Association in December, 1902:

> Having received from Ellis E. Mason, Secretary of the National Bee-Keepers' Association, the results of the December election for General Manager and three Directors, I make the following announcements:
>
> Whole number of votes cast for General Manager 610, of which N. E. France received 489; E. T. Abbott, 117; scattering, 4. Mr. N. E. France is hereby declared elected as General Manager.
>
> Whole number of votes cast for Directors 567, of which G. M. Doolittle received 364; W. F. Marks, 262; Thomas G. Newman, 249; Udo Toepperwein, 149; Wm. A. Selser, 105; Wm. McEvoy, 86; G. W. Vangundy, 74. The rest of the votes are scattered among 120 members, no one of them receiving more than 32 votes. Mr. G. M. Doolittle having received a majority vote, is hereby declared elected as Director. No other candidate for Director having received a majority vote, as is required by the Constitution, no other is elected. The Constitution says that the Directors' term of office "shall be four years, or until their successors shall be elected and qualified;" thus Mr. W. F. Marks and Mr. Thomas G. Newman retain their offices, at least for the present.
>
> W. Z. Hutchinson,
> *President National Bee-Keepers' Association.*

On the subject of the election muddle in which the National Association now finds itself, Mr. Herman F. Moore, an attorney, and Secretary of the Chicago-Northwestern Bee-Keepers' Association, has this to say:

> Cook Co., Ill., Jan. 27, 1903.
>
> Editor American Bee Journal—
>
> I have read everything that has been printed on the General Managership trouble. There is no doubt but that the words, "has been regularly and properly nominated, and is believed to be worthy of your support," should never have been printed on the ballot. I can not excuse Mr. Eugene Secor for their presence there. He, a practical politician, must have known their impropriety at the time. Perhaps he thought this was only a family matter, and the ordinary rules of ethics did not apply. I hope I am not unjust or uncharitable when I say that I believe the *true* reason for his action was a desire to "get back" at Mr. Abbott. The presence in his Annual Report, of words indicating that Mr. Abbott had never turned over the money, goes to prove this view.
>
> Mr. Abbott never was my personal preference for General Manager, nor was Mr. France. But I felt that, as Mr. Abbott had agreed to submit his status to the election in December, there should have been no attempt to prevent such a submission. I believe the said words so printed on the ballot were the result of an effort on the part of some of our officers or members to "do up" Mr. Abbott, at all events. If so, such action is on a par with the most disreputable party politics, and must be openly condemned.
>
> However, I think the old National is in no danger of immediate dissolution, any more than the family is in danger when the boy comes home and announces to father and mother that he is "not going to school any more." The young man gets a certain needed chastisement, and the great institution goes along very much as before.
>
> Let me say while I am writing, that our great body (the greatest bee-keepers' society in the world) must be governed by strict parliamentary rules. All bodies of men, associated for a common interest, have from time immemorial submitted themselves to certain rules that make for harmony and the dispatch of business. There are "Roberts' Rules of Order," "Reed's Rules," etc. Some of the errors into which our officers have fallen would have been easily avoided by following closely the rules of order applicable to such cases. This great body of 1000 American citizens can be controlled in no other way.
>
> I am satisfied that no new election is possible under our Constitution, which says, "The election shall be held in December each year." No new ballot can be cast until December, 1903, and none of us desires 12 months to elapse and nothing doing. The matter has gone to the voters in the regular way, and they have decided for Mr. France. This should end the dispute. I think even Mr. Abbott would not desire to go to the voters again for another beating.
>
> I think I am within the facts in saying that Mr. N. E. France, the General Manager-elect, has no enemies, and will make a good officer, satisfactory to all. Let him serve his term, and let our National Bee-Keepers' Association move on to victory. Herman F. Moore.

◆

Convention Notices.—We would like to suggest to secretaries of bee-keepers' associations that they send in notices of their meetings at least 30 days in advance of holding the same. Recently we received two notices too late to get them published before the meetings were to be held. We are always glad to publish such notices if received in time, but, of course, it is of no use to have a notice appear after the meeting has been held.

We trust all secretaries who read this will kindly remember it. Also remember to write the convention notice on a separate sheet of paper.

◆

Mr. J. S. Barb and Apiary.—When Mr. Barb sent the photograph for the engraving on the first page, he wrote thus:

> I send a picture showing our home and a part of my apiary. My grandfather, Gabriel Barb, settled on this place in September, 1821. He had built a log-house where our present home now stands, which was built in 1863. When my grandfather moved here he brought a colony of bees along in the old log-gum that my left hand is resting upon.
>
> My father, Isaac Barb, was born in the log-house Dec. 18, 1822, and lived all his life on this place until he died, Nov. 21, 1886. I was born in the old log-house March 5, 1850, and have lived all my life so far on the old farm, and will stay here the rest of my life. Bees have been kept continually since 1836, and there will be bees kept here as long as I stay. Is it any wonder that I *love* to work with the bees?
>
> In the foreground of the picture are two other pioneer hives, also a straw-hive that was made 34 years ago. I have an old box-hive that father used to keep his bees in, and in the season of 1869 he took a box of honey from that hive that held a little over 30 pounds, and it sold for 30 cents per pound; it came to $10, and the next year he took a box from the same hive which weighed 36 pounds. This box was sold at 25 cents per pound, and brought $9, or $19 worth of honey from the same colony in two seasons.
>
> In 1870 we started with 25 old colonies; the first swarm issued June 5 or 6, and from that time until July 3 we had 76 swarms. Our bees were nearly all in box-hives, and we did not know then about cutting out queen-cells and returning after-swarms.
>
> In the fall of 1874 we had 30 colonies when winter began, and in the spring of 1875 there were 8 colonies left. In the fall of 1878 father had 36 colonies and I had 9. In the spring of 1879 he had 3 colonies left and I had none. I had some fun that spring taking out honey from the hives and getting out beeswax. We took nearly 200 pounds of honey from the hives the bees died in, and 60 pounds of beeswax. Those were some of my earlier experiences in keeping bees. I have had some about as discouraging since, still I stick to the bees (and they stick pretty close to me, sometimes, too).
>
> You will notice a hive to the left of the extractor; that colony belongs to a stock of bees that were on the farm of my uncle, William Sanger, near North Bristol, Ohio, for over 90 years before I brought it over to its present location, as I am keeping it on shares now. There were 4 colonies when I brought them over four years ago last spring, but only one is left. I got a rousing swarm from it last season. I took nearly 50 pounds of extracted honey from the 2-story hive back of me at my right.
>
> There are two hives, one on each side of my wife, and also one back of the 2-story hive which has two cases of sections on. I traded a 5-weeks old pig for those 3 colonies, and 15 cents extra, a year ago the first part of last June. I got about 40 pounds of honey from them last season. I wintered all three of them, and another colony I got on another trade two years ago last June is shown right back of the hive between my wife and me. From those 4 colonies and their increase (3 swarms) I took nearly 150 pounds of comb honey last season. My best yield from one colony is 55 pounds of comb honey; total yield about 250 pounds of comb, and nearly 50 pounds of extracted honey.
>
> I commenced the season with 14 colonies, bought 4 swarms at $1.00 each, I furnishing the hives, and I now have 29 colonies. I gave the boy at my right in the picture two after-swarms put together—one July 2 and one July 4. August 13 they cast a good-sized swarm with a young queen, as I heard two young queens piping in the hive the evening before.
>
> Those chaff hives shown between the two trees in the upper row are empty. The tree back of me is a hard-maple tree which was planted in the spring of 1876—Centennial year; it measures 5 feet in circumference a little above the ground. I carried it nearly a quarter of a mile when I planted it.
>
> The other persons in the picture are my wife, Eliza Barb, her nephew, Harry Royer (who is living with us), and my aunt, Mrs. Elizabeth Duhl, my father's only sister, who was also born in the old log-house Jan. 29, 1830.
>
> I call this the Hillside Pioneer Apiary. I commenced taking the American Bee Journal in January, 1883, and have taken it ever since. It grows better and better. J. S. Barb.

◆

Keep Them Going.

"One step won't take you very far—
You've got to keep on walking;
One word won't tell folks who you are—
You've got to keep on talking.
"One inch won't make you very tall—
You've got to keep on growing;
One little ad. won't do it all—
Youv'e got to keep them going."

—The Implement and Vehicle News.

Contributed Articles.

WAX-PRESSES.

Their Advantages Over the Sun-Extractors—Directions for Making and Using a Cheap But Effective Hot-Water Extractor.

BY H. H. ROOT.

WERE we to go to Cuba we should find some men who keep bees only for the wax they produce. Much of the honey is fed back or wasted, because the natives think it pays them better to ship the wax than to bother with the honey. If they were to come here to the United States they would find some men who run apiaries solely for the purpose of getting the honey, paying no attention to the wax, but wasting it by throwing away old combs, etc. These men represent extremes, and probably there are not many bee-keeper who would advocate either method; but it is a recognized fact that a great amount of wax is wasted by being thrown away as dirt, old comb, etc. It is pretty generally known now that the sun-extractors are not the most economical in the long run. They have their uses, and are very convenient to leave in some handy place in the apiary, to act as a receptacle for small pieces of burr-comb which collect all the time. I do not know that any estimate can be given of the percent of wax that is wasted in rendering old combs in a sun-extractor, as it depends on the age of the combs, and how much dirt there is in them.

Lately the most up-to-date bee-keepers are beginning to use extractors in which the wax is pressed out of the old comb by means of a screw or a heavy lever, while the contents are heated above the melting point. There are three methods of rendering from old combs: 1. Pressure on the combs, when heated by steam; 2. Pressure under hot water; 3. Pressure on the comb which has been heated somewhere else.

In my experiments with wax-presses I consider steam-presses by far the most efficient. They are quicker, easier to operate, and do better work. Some have said that the old comb should be under hot water when the pressure is applied, because, as the mass of wax oozes out from the dirt, it instantly floats to the surface, giving place to that which may come afterwards; or, in other words, the hot-water method "takes in the slack." However, I believe this to be simply theory. I do not see why melted wax can not *drop down* from the old comb, which is surrounded by steam, just as well as it can *float up* from it when surrounded by hot water. Lest some one should say this is also theory, I would state that by actual test I have proven its correctness.

All other things being equal in my experiments, I have found that there can be just as much wax obtained by the steam method, *and in much less time*, than by the hot-water method. Aside from this, there are many objections to the hot-water. The juices from the dead bees or larvæ give the water a very dark, reddish-brown color, darkening the wax to a very great extent. After the pressure has been applied, and about all the wax comes out of the old comb that will come, it is then very hard to get the melted wax off the surface of the water. The only way is to let the whole mass cool so it may be taken from the top in the form of a cake.

In the third, the comb is heated in a wash-boiler or some other receptacle on the stove, and then poured into the press. I have not had as good results with this as with the other two. I admit that it is a quicker method; but when a bee-keeper renders out wax it is usually done in the winter, when his time is not the most important item. I am convinced that a great deal of wax is left in the comb unless the said comb is kept at a high temperature during the process of pressing. Again, lest some should say that this is theory, or that my experiments have not been made correctly, I would say that one writer, after reading an article in Gleanings in Bee-Culture for Sept. 15, on the subject of wax-presses, stated that he could get *more* wax by his method of pressing the comb after it had been heated elsewhere than by pressing it in hot water or steam. To prove his statements he sent a sample of the pressed-out comb, saying that we could test it for ourselves, to show that it contained no wax. As he suggested, we did test his sample in hot water, and found that it contained 25 percent pure wax. I do not mean that this method of pressing out old combs, which has been heated in another receptacle, leaves 25 percent of wax, but I do assert that it leaves a great deal more wax than the two other methods—that is, of pressing under hot water or with steam.

In describing a home-made press, since steam would require a more expensive apparatus, I will tell about a home-made wax-press using hot water as the method of heating, and giving very good results, though not as quickly as with a steam press:

The first thing to get is a water-tight barrel. Saw it off, making a tub about one foot in depth. Bore a whole in one side near the bottom, and insert a short piece of pipe, to be used to drain off the hot water and wax after pressing. A wooden plug should be fitted into the end of this pipe, to act as a valve.

We must next consider how we are going to apply the pressure—with a screw or with a lever. In my experiments either works about the same, only a lever take two to operate it, making it more expensive, and not quite so quick. I prefer a screw, and used such a one as can be found in an ordinary carpenter's bench-vise—something that can be obtained very cheaply at any hardware store. A cross-piece of hardwood, 4 inches wide by 3 inches thick, should be placed across the top of the tub, and one of corresponding dimensions underneath. These should be connected by two side-pieces, also of hard wood, about an inch from each side of the tub, and the whole firmly clamped together by long half-inch bolts with heavy washers. The nut belonging to the screw should be placed in a hole bored through the middle of the hardwood piece extending across the top of the tub, and the tub itself is to rest on the under piece. A plunger must be made having a smooth, hard top on which the screw is to rest.

When ready to begin operations, wrap up (in cheese-cloth) about 5 pounds of old comb or refuse from the solar wax-extractor, and place this package of comb in the tub. Next, pour on top of this one good-sized pailful of boiling water. It will be enough since the tub is only one foot high. Place the plunger on top, and slowly turn the screw down. The wax will immediately float to the top until the screw is clear down. Next, turn the screw up; and after tipping up the plunger with a stick, haul over the contents of the cheese-cloth package, and again apply the pressure. By this time all the wax, or as much as can be obtained, will be at the surface of the hot water, and the whole may be poured off or drawn off through the spout, and allowed to cool. By keeping four or five pailfuls of water going it is not difficult to have hot water as fast as necessary. In this way I succeeded in getting 18 ounces as the average amount of wax from 5 pounds of very old combs, and in less than 20 minutes. This amount would, of course, vary greatly according to the age of the comb and the amount of dirt or old cocoons in it.

Save up your old combs; and some winter day, when your time is not worth much, render them out and you will be surprised at the amount of wax that you receive. You can easily make 50 cents an hour—a very low figure—and in time which would otherwise be worth very little.

Medina Co., Ohio.

Easy Bee-Keeping—Prolific Queens—Introducing.

BY E. A. MORGAN.

ON page 776 (1902), in an article by F. Greiner, reference is made to the bee-keepers' convention last winter where a friend gave his management of bees. It consisted in giving plenty of room—two extra 10-frame brood-chambers full of comb were added below. It prevented swarming.

It might have prevented it in one instance, but it is not the want of room which causes bees to swarm, especially Carniolans; location controls everything. It is prosperity that makes bees swarm. I well remember several years ago paying an enormous price for a few non-swarming queens warranted never to swarm. But in my location every one swarmed, though given as much room as our friend gave. I learned later that they were reared in a district of great scarcity, and had not enough prosperity to swarm.

The advice given—invest $60 in catnip, keep 15 colonies of bees, then give plenty of room and go a-fishing 5 days of the week, would hardly work up here. The fishing on Yellow river is good, but the mosquitoes here in the woods are No. 12 size, and the way they attack a man, piercing right through a thick coat and gloves, makes it impossible to fish; to me every bite is worse than a bee-sting.

Four hundred pounds surplus per colony, at 15 cents—6000 pounds $900, *a la* Dr. Gandy. Investigation proved only a small garden patch of catnip was growing in his vicinity, and no honey in sight. I think catnip and sweet clover good honey-plants, and the planting should be encouraged, but none of us expects to get 400 pounds surplus per colony, with $60 worth of seed sown, and few will make a living at bee-keeping and go a-fishing 5 days in the week.

PROLIFICNESS OF QUEENS.

Mr. W. J. Stahmann, page 776, speaking of prolificness of queens says we cannot have prolific queens without a large hive, and in his experience a queen reared and allowed to lay eggs for a space of a week or more in a small hive, or having a small amount of bees, will seldom make a prolific queen, regardless of the stock she comes from. I have been a queen-breeder quite extensively for 20 years, and have all my queens mated in 2-frame nuclei, keeping them there until I have orders for them or want to use them myself, and I often keep them one or two months in such nuclei with a small force of bees, without in any way affecting their prolificness. When introduced to a mammoth colony they are just as prolific and long-lived as though mated in a big hive. In fact, I think all queen-breeders confine young queens to small quarters for a longer period than one week, without injuring them.

TROUBLE IN INTRODUCING A QUEEN.

On page 779 (1902) if Washington had placed his queen in a Miller cage at once instead of waiting 48 hours, then in 48 hours removed the plug, filling the entrance with a little comb and honey, then close the hive, in two days she would have been laying. Waiting 48 hours after removing the old queen gives the bees time to start queen-cells, then they will continue to rear them and become hostile to a new queen. My plan is to run their own queen into the introducing cage, let her run around a few minutes, then destroy her and run the new queen in the same cage, thereby getting the scent of their own queen, then no trouble will occur.

The question was once asked Josh Billings which was best, a large or a small hive, and arguments of advocates of each presented. He said both were right. The man with a small hive was right, for he never had bees and honey enough to fill his hive; and the one with a large hive was also right, for he couldn't get a hive large enough to hold his bees and honey. Hence it is a matter of location. This is the reason we all differ. Disposition of bees are changed by location. Chippewa Co., Wis.

◆

Chunk Honey—Various Apiarian Kinks.

BY J. M. YOUNG.

EVERY fall, after all the supers are taken from the hives, I overhaul all the unfinished sections, cut out what honey there is in them, trim the unfilled cells all off, and sell this as chunk honey. By putting it in a vessel of some kind, it can be sold to the grocers very readily, and can be put in common wooden dishes the same as butter is sold to customers. By this means the bee-keeper can get rid of everything in the comb-honey line that will not do to sell otherwise.

PAINTING HIVES AND SUPERS.

I don't see how an up-to-date bee-keeper can get along without having his hives painted. It certainly pays. The advantage of having them look clean and nice is one big item. I would paint the supers one color, and the hives another; the edge of the queen-excluders would be of a different shade, as well as the edges of the honey-boards. I now have hives in my apiary that have been painted 20 years that look very well yet, although they have been painted a time or two within this time. The advantages of having them painted are many, and a hive should not be set out even one season without being painted.

EXTRACTING-COMBS PREFERRED TO SUPERS.

In the early part of the season I select all such colonies as seem a little weak, or that are not likely to work in the supers, and fit them up with extracting-combs for extracting purposes; by this means every colony in the yard can be made to bring the bee-keeper in some revenue, that otherwise would lie around idle. Of course, plenty of combs should be given these weak colonies, and they should have good queens to start with. Colonies that won't work in the supers will store honey in the combs if given them. It will be a surprise to see the amount these weak colonies will store.

ROTTEN WOOD FOR SMOKER-FUEL.

I notice that some of the bee-keepers are talking up smoker material. I have always used rotten wood for smoke, and it is best and cheapest. Every spring I take the team and go to the woods and select old rotten logs—basswood if I can get it, and I usually do—and haul home a wagon-box of it, put it some place where it will dry quickly, and when dry it will light instantly with a match after being put in the smoker. It makes a good smoke, and is cheap, and it can be obtained wherever there is timber. I sometimes put it up in barrels, and put it away in some out-building.

BEES UNDER SNOW.

Whenever the snow begins to melt then it is time to shovel it away from the entrance or the front part of the hives, but not until it does begin to melt. Disturb the bees as little as possible, unless they begin to fly. The more bees are disturbed when it is cold, the worse it is for them. If there is snow on the hives, or in the corners, I would get it away from them, for when it begins to melt it will run into the hives more or less and wet the bees over the packing. Bees in the winter season must be kept dry if they are wintered successfully. It will not hurt them to be in a snow-drift—I don't advise their being covered clean up, but it will not hurt them for a short time. Since we have been in business, my bees have been covered up several times by snow-drifts, so that if I didn't know where they were I could not find them. My experience has been that they won't smother if they are covered clear up with snow, if the hive is kept so that it will not leak. Cass Co., Nebr.

Convention Proceedings.

Report of the Ontario Bee-Keepers' Convention, Held at Barre, Ont., Canada, Dec. 16, 17 and 18, 1902.

REPORTED BY MORLEY PETTIT.

(Continued from page 70.)

PERCENTAGE OF WATER IN HONEY.

Frank T. Shutt, M. G. F. I. C. Chemist, Dominion Experimental Farm at Ottawa, outlined some important experiments which he has been conducting relative to the percentage of water in honey under various conditions. His first work was to lay the foundation for his experiments by demonstrating that the method of determining the percentage of water in honey followed by other chemists who have published reports, is unreliable, because to expose honey for a length of time to a very high temperature causes it to lose weight by decomposure of levulose, as well as by evaporation. This he explained to the bee-keepers' convention at Woodstock last year.

The method which he adopted and found satisfactory is to expose the honey on sand or pumice for a length of time at a comparatively low temperature, 60 degrees C., and in a partial vacuum. He then experimented with honey from uncapped, partly capped, and capped comb, kept in glass-stoppered and cheese-cloth-covered bottles, in a dry and in a moist atmosphere. The results show that while honey in an ordinary atmosphere lost slightly, that preserved in a saturated atmosphere gained considerably in weight, due to absorption of moisture. Where honey was exposed to a saturated atmosphere the normal percentage of moisture—about 15 percent—increased in one case to 31 percent, and in another instance where the honey was exposed in a flat dish, to 48 percent. Throughout the experiments honey was found to have a great affinity for moisture. That from partly capped combs contains less water than that from uncapped, but more than that from capped combs. The percentage also varies with the season. Honey containing more than the normal percentage of water, not only is thin and unattractive, but readily ferments. These results and the experience of our best bee-keepers show that honey should not be extracted until all or at least partly capped. It should then be exposed as little as possible to the air, and unless sealed perfectly should be kept in a dry place. If these simple rules be followed it will keep indefinitely.

Prof. Shutt showed the result of his experiments in three charts.

EXPERIMENTS ON STORAGE OF HONEY—1902.

		Percentage of Water.
	Honey as extracted from capped comb	15.88
A	Honey exposed to dry atmosphere one month	14.24
	Honey exposed to moist atmosphere one month	31.46
B	Honey exposed to dry atmosphere 20 days	13.84
	Honey exposed to moist atmosphere 20 days	48.23

A—Honey in glass cylinder.
B—Honey in open flat dish.

WATER IN HONEY—1901.

WHERE KEPT.		BOTTLE CLOSED WITH.	EXTRACTION.	ANALYSIS.	PERCENTAGE OF WATER.
Capped	Honey-house	G.S.	Aug. 6th	Oct. 1st	15.46
	Cellar	C.C.			15.89
	Honey-house	G S.			16.95
	Cellar	C.C.			15.84
Part capped	Honey-house	G.S.	July 1st	Oct. 1st	19.12
	Cellar	C.C.			20.68
	Honey-house	G.S.			20.63
	Cellar	C.C.			21.03
Un-capped	Honey house	G.S.	July 1st	Oct. 1st	19.57
	Cellar	C.C.			19.24
	Honey-house	G.S.			18.25
	Cellar	C.C.			22.09

WATER IN HONEY—1902.

Capped	Laboratory	G.S.	Aug. 7th	Nov. 6th	15.78
	Honey-house	C.C.	"	"	15.88
	Laboratory	G.S.	"	"	17.35
	Honey-house	C.C.	"	"	16.25
Part capped	Laboratory	G.S.	July 7th	Nov. 6th	16.58
	Honey-house	C.C.	"	"	15.33
	Laboratory	G.S.	"	"	15.31
	Honey-house	C.C.	"	"	15.90
Un-capped	Laboratory	G.S.	July 7th	Nov. 6th	17.13
	Honey-house	C.C.	"	"	16.33
	Laboratory	G.S.	"	"	17.56
	Honey-house	C.C.	"	"	16.18

G.S —Glass Stopper.
C.C.—Cheese Cloth.

Mr. Holtermann—These results are very important. They should be placed in the hands of buyers to teach them the proper care of honey.

Mr. Heise—When the weight of honey increases by the absorption of moisture, does the bulk also increase?

Mr. Darling—We know that it does by the way honey in comb swells out against the capping when in a damp place.

By motion of Messrs. Gemmill and Holmes, a vote of thanks was tendered Prof. Shutt and Prof. Creelman, for the instructive and inspiring manner in which they had addressed this convention.

SUPPLYING MOISTURE IN A DRY CELLAR.

"Is it advisable to supply moisture in cellar-wintering in the case of a very dry cellar?"

Mr. Holtermann—There is more danger from a dry cellar than from a moist one. A bee-cellar should have a wet-and-dry bulb thermometer to test the matter.

Mr. Holtermann thought the air should be almost saturated. He would like to see the matter thoroughly tested. In the cellar where he is wintering his bees the fresh air passes first through a small room where there is a stove to warm it slightly if necessary. When he considers the cellar too dry he sets two buckets of water in the room, with a blanket extending from one to the other in such a manner that it is kept soaked with water. This exposes a large surface of moisture to the dry air, which takes up the water and itself becomes moist.

Mr. Dickenson thought a damp cellar all right.

Mr. Sibbald prefers a dry cellar, but can make any cellar dry if it is large enough to partition off a room for the bees. This seems to make the bees' compartment dryer. Where possible, he has a hole in the ceiling for ventilation, then piles straw and chaff, or sawdust, over it to keep the air from escaping too rapidly.

Mr. Post experimented with the hygrometer in his cellar last winter, and decided that 2 degrees between the wet and dry bulb thermometer was about the right thing.

EXTRACTING-COMBS FROM A FOUL-BROODY COLONY.

"Is it safe to use again extracting-combs that have been used over a colony slightly affected with foul brood, said combs having been over a queen-excluder and have never had brood in them?"

Mr. McEvoy said it was perfectly safe for a skilled man who understood all the conditions; but he thought it better always to err on the safe side.

RELIQUEFYING HONEY IN GLASS JARS.

"How liquefy honey which has granulated in glass jars?"

Have a large pan to reach clear across the stove with a slatted frame to hold the bottles. Loosen the corks. As soon as the honey is liquefied seal it up again while yet hot.

MOVING BEES ON SLEIGHS.

"Is there much risk in moving bees on sleighs in winter?"

Mr. Holtermann told of buying bees in New York State in the fall of 1901. They were hauled to the train on sleighs, shipped to Brantford, and hauled on wagons to the apiary. They stood ten days in the yard, but as the weather remained cool they were put into the cellar without a cleansing flight. Any one can imagine the condition they were in; in the abdomen of each bee was a globule of watery feces—the first stages of dysentery. Mr. Holtermann raised the cellar temperature to 72 degrees, Fahr., for two weeks, until the bees, upon examination, were found to have these globules literally dried out of them. He then lowered the temperature to about 40 degrees, Fahr., and kept it as near there as possible the rest of the winter. No dystentery appeared, and the bees came out in good shape in spring.

In the evening W. Z. Hutchinson's paper, on "Commercial Organization," was read by the Secretary, after which the members banqueted in the dining hall of the Queen's Hotel.

THURSDAY MORNING.

The report of the committee on honey exchange was read by W. A. Chrysler, as follows:

ONTARIO HONEY EXCHANGE.

This Association shall be called "The Ontario Honey Exchange," and a commercial part of the Ontario Bee-Keepers' Association, and shall include in its jurisdiction the Province of Ontario, with such additional territory as from time to time may be found feasible to organize.

Its object is to establish a reliable and fair market price for the product of its members, the more proper distribution of honey, and to establish, when advisable, foreign and distant Canadian markets.

The main officers of the Exchange shall consist of five Directors elected by the members of the Ontario Bee-Keepers' Association at each annual meeting, and to hold office for one year, and shall direct all business of the Exchange.

As soon as elected they shall elect from their number a President, Vice-President, Secretary, Treasurer, and Business Manager, who shall be known as officers of the Ontario Honey Exchange.

They will choose a location and obtain by rental or otherwise, a suitable office and warerooms in some central city, that shall be known as headquarters.

They shall, where feasible, appoint one or more persons to organize each district that is not already organized into a District Bee-Keepers' Association, and should be affiliated with the Ontario Bee-Keepers' Association.

To all such affiliated societies instructions shall be given from the main office for the collecting and forwarding of honey, beeswax, etc.

The local affiliated societies may elect from their number, called a local manager, who shall be made responsible to the local association, and that to the main office for all moneys and goods he may be entrusted with.

It shall be the duty of the local association to appoint their secretary or local manager, to obtain statistics of honey, bees, etc., in his district, when called upon by the General Manager to do so, and shall include other information, such as estimates of the amount of honey produced, the amount that members will require to sell to consumers and the retail trade on their own account, and the amount likely to be placed in the Exchange. Also, if a shortage in the district, the amount that could profitably be shipped in.

Members in unorganized districts in any part of Canada shall also be requested from the head office to report on the honey crop, and estimates similar to local associations. In case some may not wish to join either the local association or Honey Exchange, the local manager, or a member, may offer them within a business margin of the selling price of honey, and place it in the Exchange on his own account, or as his own honey. (He will have the privilege of receiving an advance in money on his producing a warehouse receipt.) They will not then sell to others for a less price.

Funds may be advanced to members by the Exchange to the amount of three-fifths of the value of honey consigned, and charge the current bank interest.

The directors of headquarters of the Exchange, on obtaining crop reports from the local associations and others, shall set the prices of the different grades of honey for a certain period; at the end of such time specified they may lower, raise, or maintain same prices as the market will warrant.

All honey sold by the Exchange shall be graded according to rules adopted by the Ontario Bee-Keepers' Association.

Honey sold from the local managers' warerooms, and also that of headquarters, must be graded by the member supplying it, and re-examined and graded, if necessary, by the Manager in each warehouse.

All honey received by the Exchange for sale must be branded and sealed by the stamp of the Ontario Honey Exchange, and backed by a good, strong guarantee.

The duties of the President, Vice-President, Secretary, Treasurer, and Business Manager, shall be arranged by the Provisional Directors, as circumstances will admit, until the constitution and by-laws are thoroughly revised and amended, ready for incorporation.

The remuneration of the five (commercial) directors shall be determined by the directors of the Ontario Bee-Keepers' Association, and shall be taken from the dues and profits of goods handled.

It should be the object of the Exchange to place the honey as near as possible to the consumer, saving extra transportation and commission for its members.

The funds for carrying on the Exchange will be obtained by plans and in a manner advised by the directorate.

W. A. CHRYSLER.

Mr. Sibbald—This matter is most important. The number of bees kept in this country is increasing rapidly.

Mr. McEvoy—The business is going into the hands of specialists.

Mr. Sibbald—If we organized only for the sake of crop reports, it would be worth while. In the case of failure in one part, and over-production in another, the honey could be equalized, and a uniform price and uniform consumption could be maintained in the Province. We would also prevent the over-crowding of central markets which is now prevalent. We could soon learn how much honey is produced in the Province, how much consumed, and consequently what would need to be exported.

If there were a registered trade mark we could know just where our honey goes, and get at the source of adulteration. Then, in the matter of advertising, individually we have not sufficient capital, but by systematic advertising by an Exchange the consumption of honey could be doubled, and more.

An Exchange could afford to export the surplus honey at a sacrifice in order to keep the home market brisk. It would come alike to all. We do not wish to enhance the price so as to make it prohibitive, we want only a fair and uniform price. Organized reporting and systematic grading would make the indifferent bee-man spruce up and produce a better article.

It was resolved that the bee-men present meet at the close of the convention to organize a honey exchange.

Moved by J. D. Evans, seconded by R. F. Holtermann, this Association will co-operate with the directors of the Industrial Exhibition, Toronto, in making the Dominion Exhibition, to be held by them, a success, and that the President and Secretary forward a petition to the Dominion Government, asking financial aid to said exhibition. Carried.

Mr. Fixter brought up the matter of exhibiting at St. Louis, urging that preparations be begun at once in order that we might put up a creditable exhibit there. It was decided that the matter be left in the hands of the executive.

On motion, it was decided that the executive committee meet Mr. Creelman, Provincial Superintendent of Farmers' Institutes, and make arrangements with him to help this Association in advertising its meetings and getting out programs.

A vote of thanks was tendered to Mr. Fixter for bringing up and urging the matter of a honey exhibit at St. Louis.

On motion, the Board of Directors were allowed to grant money for organizing a honey exchange.

(The End.)

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

Mrs. West and Bee-Keeping in the South.

At the Denver convention one of the many bee-keeping sisters that I enjoyed meeting very much was Mrs. West, of Texas. She is a brisk business woman, has very decided views, and a unique manner of expressing them. It was a pleasure to me to hear her talk. Those that met her at Denver will, I feel sure, be glad to see the communication from her in this number. If she would, I feel sure she might give us a good many interesting and instructive items about bee-keeping in the South.

Bottom Foundation Starters in Sections.

One of the things it may be worth while for us to talk about a little is whether it is best to have a bottom starter in the sections or not. Some one may say, "What do you want a bottom starter for, any way? A top starter is all that is needed to make the bees build straight, isn't it?" Yes, they will get along very well with only a top starter so far as building straight is concerned, but is that all that is needed? Don't you have any trouble with having your honey break out of the section, especially if you ship it? Now, doesn't most of the trouble from breakage come from the fact that the honey is not securely fastened to the bottom of the sections, as it was at the top?

If it is securely fastened to the section all around, built solid full, isn't it pretty safe from breakage, with good handling? Then doesn't it look a good deal better?

If it is securely fastened at the top and part way down the sides, there is great danger from breakage, but if it is securely fastened at the top and bottom, even if not fastened at the sides at all, it is pretty safe. But if it is securely fastened at the top and bottom, you need not worry about the sides—they will be fastened all right.

Another thing: During a slow flow—and especially is this true with a weak colony—the bees will sometimes draw out only one side of the foundation, and fill it with honey, and the weight will cause it to sag over to one side, and it will be fastened to the separator. This will not happen with the two pieces, for the first thing the bees will do will be to fasten together the two pieces, even if they do not put any honey in.

A good size for the top piece is 3¼ inches deep, and for the bottom starter ⅝-inch deep. If the bottom starters are made deeper they will fall over and make trouble, and the bees will sometimes gnaw them down if they are much shallower. That would leave a ⅛ inch space between the pieces, providing there was no waste in the foundation by fastening it in; but that waste increases the space to something more than ⅛ of an inch.

This space between the pieces does away with any sag there might be by the stretching of the foundation, and the result is a straight, well-filled, securely-fastened section of comb honey.

Reading in Winter—Other Comments.

I notice on page 25 one of the subscribers asks to have discontinued her copy of the American Bee Journal until spring. Well, I don't want anything like that. We have the "A B C of Bee-Cultnre," "Cook's Manual," Doolittle's "Scientific Queen-Rearing," and other bee-books. Then I take two other bee-papers besides the Bee Journal, and they are all full of good instructions. I am afraid I'd miss something by letting the Bee Journal go by. I do not consider myself so smart in intellect, but have sense enough to read more than one book in the winter.

Well, don't you think the Baron quite a smart fellow to inject long life into his queens? And he signs his name right. His story reminds me of other long-winded stories about catnip and large yields of honey.

You will remember a bee-keeper was telling us at the Denver convention about a Texas honey-producer selling adulterated honey, or trying to do so. Well, I wrote to the one who reported it at Denver, and asked him to send me a letter so I could send it to the Bee Journal, but no, he will not do it. He went all around with excuses, and so on, but will not come out on the adulterated-honey question. I want to be honest in all my dealings, and will be; so should be the bee-keepers all over the land.

My bees went into winter quarters in good shape in November.

I sowed horsemint, and it is up well; in the spring I will plant quite a lot of sunflowers, and they are something the bees like so much.

Well, Miss Snyder struck the keynote when she said bees did not like a dirty smell. Bless the little bees, how I love them! First, because they are so industrious; and then they are so clean. I have no use for a dirty, lazy person, and never blame the bees for "doing business" with such people. MRS. C. R. WEST.

Ellis Co., Tex., Jan. 14.

✻ The Afterthought. ✻

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, O.

FEEDING BY WHOLESALE.

It's pretty lively business—187 pounds per hour—for bees to carry away feed in the open air. Divided among the 97 colonies it is about 2 pounds per colony per hour. Presumably some would get more, and some slow coaches quite a bit less than that. Mr. Hall's simple arrangements are worth remembering, in that they *worked* tolerably well. Page 812.

SPREADING PEAR-BLIGHT.

Half inclined to say that Prof. Cook "gave us away" badly, and reprehensibly, in admitting that bees spread pear-blight on trees never in bloom, while their *alibi* was entirely unbroken. We know very well they wouldn't touch blight-juice in time of nectar-flow. Will they touch it at all? We demand that *somebody* should see them. Surely, on rows of little nursery trees they would not be hard to see. Page 813.

A RAPID STYLE OF INCREASE.

Keeping the old colony mainly together, and taking out one comb from time to time, thought to be the most rapid style of increase. Looks reasonable. But in that style of procedure watch out lest you chill or starve lots of unsealed brood. Page 814.

COMBS COLORING HONEY.

Dr. Mason rather got the drop on the convention about honey from black combs being normally white. Still, perhaps we should discount his evidence a little. In actual use I think bees polish the interior of a cell every time they use it. Put honey into a comb yourself and there is a lack of this polish. It's pretty plain that the rough, unpolished surface would give out *more* coloring matter than the polished surface would. With all discounts made, however, it's lawful to give the combs which are not black the preference. But it's not a pleasant question—the question, Must I sacrifice most of my extracting-combs and get new ones built? Page 822.

GROWING ALFALFA IN THE EAST.

So the plains folk caught the alfalfa woodchuck because they had to catch him or starve. We see. Not being driven to it our luck has been less. J. E. Johnson says "no doubt" the right bug can be developed here in time without using inhabited soil. Hardly so strong as that. Common clover has animalculæ which serve a similar purpose to itself. If these differ only very slightly from the ones under consideration, probably he is right. If otherwise, such accommodation to live on a new plant might take too long. Especially, we must remember, the accommodation can not begin till they begin to live on the alfalfa to some extent. Might be driven to begin in a very dry soil in which nothing else was growing—and perhaps this is one reason for the better success in dry regions. Page 823.

CHAFF-HIVES IN COLORADO.

Old and worn but not settled. What a lot of other things in apiculture are just so, too, Mr. Aikin! And your experience is chaff-hives in Colorado winter bees hardly as well as singles do. Pin for that! Page 823.

FILLING CASES WITH SECTIONS OF HONEY.

All aroud first, and last in the center—is Mr. Holdener's way to fill section-cases that have paper trays in them. Perchance Mr. Doolittle was thinking about cases that have only two tiers, and in which every section touches the tray somewhere. A tin guide is manifestly needed for these. Page 828.

KEEPING BEES ON SHARES.

L. E. Kerr seems to hold the belt as the champion bees-on-shares man. Has 200 colonies out thus, scattered 300 miles. Also keeping some on shares himself. Never any trouble. We are surprised to see past report and repute so traversed. Having an itemized bargain fully written down seems to be the secret. Must be a quite reasonable man in addition. Page 828.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

Tartaric Acid to Prevent Honey-Granulation.

Will you please inform me by return mail. what kind of acid is used in syrup to keep it from granulating? And how much of the acid is used to a gallon of syrup?

TENNESSEE.

ANSWER.—An even teaspoonful of tartaric acid for every 30 pounds of sugar is stirred into the syrup about the time the sugar is dissolved. The acid is first dissolved in a little water.

Now it seems a tough thing that I am not allowed to answer that by mail; but then you can easily see that if I answer your question by mail I must answer others, and that would take a lot of time that I can't afford. You wouldn't like it if I'd answer some one else by mail and wouldn't answer your questions by mail, would you? Neither would they like it for me to answer yours and not theirs. So long as I can not answer all by mail don't you think it the best plan for me to treat all alike, and answer all in this department?

Rapidity of a Honey-Extractor.

About how many revolutions in a minute should comb-baskets in a honey-extractor go? MINNESOTA.

ANSWER.—I don't know, and I don't think any one knows, for there is no fixed number of revolutions so long as there is a difference in extractors and combs to be extracted. An extractor in which the comb is a great distance from the center of the shaft will not need to revolve so rapidly as one with the comb nearer the shaft. A new and tender comb will not stand so rapid turning as an old, tough one. But you will soon learn by experience, for so long as the comb stands it without injury you may feel safe that you are not turning too fast.

Getting Propolis Off Fence Separators—Keeping Pollen Out of Sections.

1. Is there any other way of getting the propolis off of fence separators besides the tiresome way of scraping? Will boiling injure the glued joints?

2. Is there any sure way of keeping pollen out of the sections, where the swarm is hived on starters, in brood-frames, on the old stand, with supers partly filled placed on a new hive? MICHIGAN.

ANSWERS.—1. I don't know of any better way than to scrape. Boiling in water would dissolve the glue, and would not be a success in removing the propolis.

2. I don't believe there is, if you give the sections at the time of hiving. Better wait two or three days after hiving before you give the sections; then the bees will have such a start in the brood-chamber that they will not want to carry pollen above.

Moving Bees in Winter-Cases.

Would you advise moving 30 colonies of bees, in winter-cases, 6 miles on sleighs? or would you wait until spring? If done now, what precautions are necessary? CANADA.

ANSWER.—If convenient, it would be as well to wait till spring. If moved now, take pains to avoid having the combs tip over sidewise, or swing from side to side, especially when the cold is very severe. When quite cold the combs are brittle and easily broken.

Feeding Bees in Winter.

I have a few colonies that have not quite enough honey to run them through the winter, so I would like to feed them, but as I have never done any of it before, I would like to know how to do it, at this time of year. What is the best and cheapest feed for them? KANSAS.

ANSWER.—That's one of the things that you will find fully answered in your bee-book, and it will be the best investment you can make to get a bee-book if you have none. You will find from the book that if you have no combs of honey the best thing will be to make cakes of candy an inch or so thick. Just boil the sugar in a little water, being very sure not to let it burn, pour it into greased pans, and when cold lay a cake over the top-bars and cover up close.

Comb Honey for Home Use—Propolisin.

1. I am running for comb honey. How would it work to put super foundation in brood-frames and set the hive over a strong colony, with a queen-excluder between the hives, and use the honey thus stored for my own table? Would they store more honey by so doing?

2. In the January number of Gleanings there is mention made of a "propolisin" for sores. Can you tell me how it is prepared? MINNESOTA.

ANSWERS.—1. It will work well, and I think you will get more honey. A good many Texas bee-keepers are quite enthusiastic about bulk honey, producing comb honey in the way you speak of, cutting it up and packing it in cans, and then filling up with extracted honey.

2. I don't know how "propolisin" is prepared, as I think the process has never been made public. It is quite possible, however, that you could get the same benefit with very little preparation. If the propolis is soft, it might be spread on a cloth and applied where desired, and if hard it might be powered and mixed with lard or melted tallow.

Keeping Queens—Transferring Bees.

1. When is a queen-cell ripe?

2. Where should the queen-cells be kept until we can use the queens?

3. We have some queens which we wish to keep until spring, when we will transfer some blacks out of old box-hives. Where should we keep them?

4. We have some queens that we have put in strong colonies, that have not mated. There will be some warm weather through the winter, that the bees will stir out, but they have no drones. Will the queens lay through the winter, or will they wait until next spring, when drones will be reared?

5. When would be a good time to commence transferring from box-hives, in this locality? ALABAMA.

ANSWERS.—1. The term "ripe" is applied to a queen-cell when it is near the time for the young queen to emerge, perhaps any time within two days, possibly within three, of emergence. When a cell is sealed, you may know that at the farthest it will be only about eight days till the young queen emerges. Usually the sharp point of the cell will be gnawed away something like two days before hatching, leaving the cell quite rounding at the end. When a number of cells are shut in with an excluder in a strong colony, as mentioned on page 761 (1902), the time being all right for swarming, the bees will allow only one of them to emerge, and you can open the hive and take out any cells that are very ripe, these cells having the cap partly gnawed open by the young queen within. Of course the free queen can also be taken out, if you should happen to see her. The bees will keep the young queens (all but one) imprisoned in the cells a day or more after they are ripe enough so you can see the slit where the cap is partly gnawed open.

2. You can keep the cells in a nucleus until one of them hatches, when all the rest of the cells will be destroyed unless you remove or cage them. In other words, you can keep only one queen in a nucleus.

3. You may succeed in keeping them in nuclei.

4. You should not expect your unmated queens to lay through the winter, and their chances for mating next spring are not good.

5. Transfer in time of fruit-bloom, or perhaps better still, wait till the colony swarms, and then transfer three weeks after swarming.

What Caused the Foul Brood?

Ten or 12 years ago I lost a large part of my bees during the winter, by bad honey; they got the dysentery, and the combs were in bad shape for swarms and nuclei. I could not get them cleaned by the bees so I bought 8 pounds of foundation, and in the summer I tried to increase as fast as I could. The first few nuclei I made had combs, and then I made a few that had foundation, and after awhile I found they had foul brood, but those on the full combs were healthy. I burned all the nuclei that were sick, made new ones, and gave them foundation; only a few were on full combs, but as soon as they had brood then they had foul-brood again, but not in those that had full frames, but every one that had a little foundation in. They were burned and also the rest of the foundation, and a little later on one hive more; all the other colonies kept free from the sickness. Was it possible that the germs of the disease were in the foundation? Or were the nuclei affected in some other way? MINNESOTA.

ANSWER.—According to what you tell about the matter, it looks very much as if the foundation was to blame, and yet it has been generally understood as a fully settled thing that even if foundation were made from diseased combs there would be no danger. In spite of appearances, I am of the opinion that the foundation was not to blame.

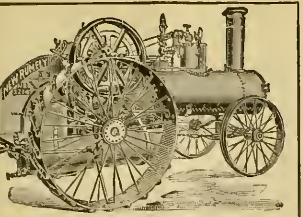
Removing Honey from Bait-Sections.

I sent a sample of some comb honey which my bees gathered in September. Please examine it and tell me what it is gathered from?

From the first it never seemed to be a liquid, but more like molasses sugar; later it became quite hard and white. Do you think the bees will carry it out in the spring?

I have quite a number of bait-sections with it in. I set the sections out for the bees to clean out last fall, but they left that in. NEW YORK.

ANSWER.—I don't know from what the honey was gathered, but it is certainly very solid, and withal quite tough. I am very much afraid you can not get it emptied out of the sections so as to make them proper for bait-sections. By spraying them with water as often as the bees lick them dry, you may get them emptied out, but some of the granules might remain, and that is generally considered objectionable. Perhaps the best thing will be to melt them up, heating them carefully and slowly so as not to injure the flavor of the honey, then taking off the cake of wax when cooled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both as to traction and generating and supplying power, are typical of all that is best for threshermen. They are rear geared, gears are of steel, cross heads and slides are protected from dust, they are free from all trappy devices. Single or double cylinders, burn wood or coal, or direct flue for burning straw. Fit companions in the threshing field for the famous **New Rumely Separators.** Free catalogue describes all. Write for it.

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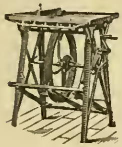
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What Yon Yonson Thinks

Vel, my goodness, ay don't kin understaud vy for dom hav such plenty awful big rumpus bout da yeneral manager muddle. Ay tank if dom don't stop deirs quvarning, an play fair, dom goan to all fall in da puddle. Den ay lak to know who goan to hole da lines an keep das N. B. K. A. ban' vagon in da middle of da road.

My goodeness, Peter Peterson, he yust bean purdneer to yoin himself into das N. B. K. A., but now he say if dom goan to hav big fiteing den he tank dom hav to excuse Peter. For long time ago ay read sermon in Gleanings on Mr. A. I. Gleanings, he say dat Satan yust lurned a new trick. My goodness, ay tank he bean springing som new trick on da officers of da N. B. K. A. ven dom big bee-mans vot love each odder plenty much for long time, an for menny years dom bean pat each odder on da back an say, "He (Mr. Abbott) iss a awful smart feller, an he iss plenty honest and good tempernce man, an he iss yust da feller for yeneral manager;" an den all dom big bee-mans, vat dom call directors, dom vote for him aud he vas elected, and every ting seems to be going so nice som a little red vagon, but dom forgot to greas dat vagon vid da oil of human kindness, and it seems dom all vont to ride in da frunt seat. But da vagon begins to run awful heavy, an mak awful big nois an racket, an ay tank if don all goan to ride in da frunt seat dom better greas da frunt veels any vay, and it is nutting better dan da oil of human kindness.

My goodness, ay like all dom big bee-mans, an' ay believe dom all iss good an honest, but Satan is trying to slip into deirs hearts so dom can't love each odder an overlook each odder's faults. My goodness, ve all have faults, an if ve don't overlook each other's faults, den da Lord don't goan to forgive our faults, an he say ve haff to go to da left hand' side vid all da goats; an den da bad man goan to ride us on da goat, and it goan to go awful hard vid us, an ve be awful sorry.

My goodness, vy for can't we love each odder, and tak each odder by da hand, an all vork togedder? Dom directors acknoledge dom mak da mistake vot cause das rumpus. Now, vy for shall other people suffer for da mistake of da directors? Did not our Savior suffer for us all? An' don't he say if ve hate ours brother ve shal never enter da kingdom of heaven? If ve love ours brodder let us show it in ours akshuns, an' da N. B. K. A. shal grow an flurish as da green bay-tree.

Now let us all stop fiteing each odder, an fite Satan, an da slop hunny mans, and da foul brood, an so on. Dere is plenty to do, so let us not stay home an quvarl lak chilren, but let us go out in da field an vork, an not monkey roun' till it bean purdnear sundown. An' if anybody vot feel lak dom von't to fite, let dom fite sin an Satan. Ay tank ve all can find him purty close to home.

Ay tank uow ve come to big hill, an it is time for Yon Yonson to push, and if dom officers vil yust tak off da break an dom bee-mans vil all help, ve vill soon be goan hally hooping agin. Tak new start, hav lection over, an have it fair, an all dom fellers vat mak bee-papers, don't tell us forty-leven times

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Alfalfa Clover	.80	1.40	3.25	6.00

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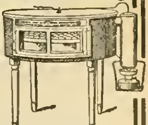
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who you goan to vote for, an who you tank is da best man, but youst vote yours little ticket, an ve vill du da same, an du talking after 'lection.

Now, it is youst as easy to du right as to du rong, if ve can youst tank so, an if ve is honest an du vot is fair, dan ve feel happy an good, youst lak ve vas in bed; but if ve try to skeem an vork, or say tings to ours brodder's ruin, den ve do somtings vat ve kan't undo, and our conshuns vil yust keep grinding avay so ve kan't sleep, an ve sure haff to answer for it some time.

Yours for fair, squair lekshun; every man vote hiss own tiket, an everybody be satisfied vid results. YON YONSON.

FROM MANY FIELDS

Results of the Season of 1902.

I had 18 colonies come out in good shape last spring, and increased to 22. I had to feed all through June, when they ought to have been rushing in white clover. I got no honey until August 15, then there was a good flow from buckwheat, goldenrod, white asters, and numerous other fall flowers, from which we secured 950 pounds of honey in the 4x5x1$\frac{3}{8}$ plain sections, which sells at 12 and 14 cents per pound in the market. J. R. KAMERER.

Van Buren Co., Mich., Jan. 12.

Rearing Long-Lived Queens.

It was with great pleasure I read Mr. C. P. Dadants' article on "Rearing Long-Lived Queens," on page 807 (1902).

Mr. Dadant always hits from the shoulder, and yet so tempered with courtesy is the blow that it leaves no bruise. I read his articles with the deepest interest, feeling assured that whatever he advances has been fully tried and tested. This I also feel of the writings of Mr. Doolittle and Dr. Miller, and, now with this trio opposed to Dr. Gallup's charge of universally poor queens, I think that gentleman would display wisdom and discretion by retiring from the field.

I am not sure that Mr. Doolittle admits this attachment of the nymph to the cell is an "umbilical cord," certainly it has never so appeared to me. I have always looked upon it as a support to young royalty, made necessary by the inclination of the cell, and, if I am right, it will not be found in case of the worker, as the position of the cell does not require it. I have seen this attachment in the chrysalis of other insects, and while it may answer as a means of conveying nourishment, corresponding to the umbilical cord in animals, I am yet to be convinced of it.

Mr. Dadant's article can be profitably read by all interested in queen-rearing, and particularly by those who, in search for something new, are inclined to turn aside and "Gallup" up any "Alley" that presents itself.

C. S. HARRIS.

Volusia Co., Fla., Dec. 25.

Results of the Past Season.

On the last day of May, 1902, I bought 26 colonies of bees. They were in pretty fair shape, except one very weak colony which I built up by giving combs of brood from other colonies.

As it was so cold during June and July they did not make a big record, but increased only to 42, and stored 1200 pounds of comb and extracted honey.

I dispose of my honey in the home market. The extracted I put in 1-quart Mason jars, and sold at 35 cents per jar. The comb honey I sold at 12$\frac{1}{2}$ to 15 cents per section, for the fair to good grades.

Most of the bees in this part of the country are wintered in cellars, although I think they can be wintered as successfully outdoors, and I think I shall try it that way next winter.

To make cows pay, use Sharples Cream Separators
Book Business,Dairying& Cat.212 free.W.Chester,Pa

The wintering problem is one thing the bee-keepers in the Salt River Valley, Arizona, where I used to live, do not have to contend with.

White clover here this year was still blooming on Oct. 25, and the bees were working on it.

In answer to the question of F. Durant, page 812, concerning ginseng, if the ground is ‘properly prepared, and other things favorable, it will be marketable in from 7 to 10 years after planting for the seed to germinate.

I think the American Bee Journal is a good paper, and wish it every success.

Benzie Co., Mich., Jan. 5. B. L. BYER.

Depend on White Clover.

The "Old Reliable" is all right, and I do not want to keep bees without it. The winter of 1901-02 was bad on the bees, about ⅔ of them dying in this neighborhood. We had 24 colonies and they all died but 7. These 7 colonies increased to 12 and stored 350 pounds of comb honey.

We have to depend on clover mostly; we have plenty of fruit-bloom, but we have nothing to count on except white clover. We have a very large paper-mill here and they take all linden, popular, maple, and all kinds of white wood, so there is not much encouragement for bee-keeping here. But we will have to do as the old lady said, "Grin and bear it." S. H. STAUFFER.

Blair Co., Penna., Jan. 9.

California and the Government Report.

California should be heard from, at least since Texas got so far ahead in that report, and Nebraska has all but taken California's laurels.

That report of 1899 was made in a very short year for California. Southern California produced about 74 cars of honey. Where

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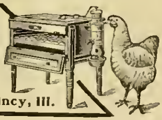

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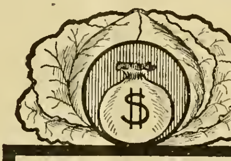

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would Texas be in a year like 1897, with Southern California's crop of 500 cars, valued at $600,000?

I notice also that the proportion of the Texas product is only 50 percent on the investment, while California, even in a short year (1899), yields nearly 100 percent, and Colorado 90 percent on investment.

That California report was from 6,000 farms, while Texas reported 60,000. I append the Government figures:

	Value of bees in 1899	Value of product in 1899	Percent
California.....	$336,885	$331,939	100
Colorado....	195,096	171,740	90
Texas.......	849,483	488,527	50

B. S. K. BENNETT.
Los Angeles Co., Calif.

[The above was sent to Mr. Working, for the Denver convention, but was mislaid and not found in time, so is given now.—EDITOR.]

Growing Alfalfa—Honey-Boards.

I would say to the readers of the American Bee Journal that they are wasting their time trying to raise alfalfa on ground that lifts with the freezing in the winter. Alfalfa will not grow where freezing pulls the fence-posts out of the ground. Where alfalfa does best the ground cracks open with the winter freezing, showing that it contracts. Alfalfa has very long roots, and although it will come up and grow well almost anywhere the first winter, if the ground is moist enough to raise the plant with the freezing; and this will be the case whether there are any tubercles on the roots or not.

Don't bother about the tubercles; if you have the land to grow it on, the tubercles will come.

I see no reports of better results than I had with a few bees last year. From 2 colonies, spring count, I increased to 7, and took off 545 finished sections of comb honey. From one 12th-of-June swarm, I took 201 finished sections.

If you use a honey-board it saves a lot of daubed sections to turn the side with the strips on up, and hold it a bee-space above the sections by driving four small nails through it, and let nails stick out a bee-space from the smooth side.

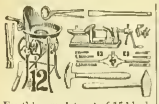
Heat escapes from the top; if bees have a good blanket of some absorbent, nonconducing substance on top, it seems to me it is useless to try to tuck them in at the side. A tank of water well protected on top will not freeze. GRIFFEN CULBERTSON.

Phillips Co., Kans.

A Queen-Introducing Experience.

I think it will be hard on bees around here this year. It is so long since they had a flight, some time about Nov. 20.

I had quite an experience with a queen I got last summer. I had a colony that lost their queen and were so for two or more weeks. I was away at the time and judged the time to be about that long. Well, I gave them 4 frames of brood fit to rear a queen, but they did not, so I sent for a queen, and received her all right. I changed cages, that is, I put the queen in a new cage, and introduced her in the evening, between the combs. Now, all the brood in the hive was about 10 days old, and no queen-cells in the hive. I looked at her the next morning, and found that she was out of the cage, and running about the combs as unconcerned as you please. I in-



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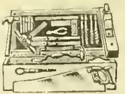
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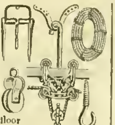
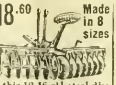

$8.50 for 40 ft. Hay Carrrier outfit. One carrier, 1 fork, 13 rafter irons and hooks. 180 ft. rope, 5 floor hooks, 3 pulleys. Wood, steel and cable track outfits any lengths.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Please mention Bee Journal when writing

tended to leave her locked up until the bees would eat the candy and let her out by themselves, but in fixing the cage between the combs I guess they became pried open and she got out. Well, they didn't seem to mind her any, and I thought she was all right, and left them alone. About 10 days after, I looked at them and to my great surprise found 3 queen-cells and no queen. The cells were worker-cells, and so small that you would not think a worker could be reared in it. Sixteen days after introducing the queen, I looked again and found one queen out, and the others just coming out. I killed those 2 and left the one that was out first. I gave them some more brood, and some time afterward she started to lay, and kept right at it until cold weather started.

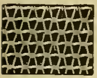
So you see, they were simple enough to kill one, they were wise enough to rear three.

Dubuque Co., Iowa. JAMES KANE.

CONVENTION NOTICE.

New York.—The annual meeting of the Oswego County Bee-Keepers' Association will be held at Fulton, N. Y., Saturday, March 7, 1903. Prof. Frank Benton will be present and address the meeting. An interesting program is being prepared, and all persons interested in bees are cordially invited to be present.

MORTIMER STEVENS, Pres.
CHAS. B. ALLEN, Sec.



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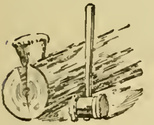

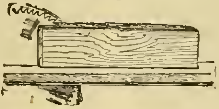

SPLIT HICKORY vs. SAWED.—A vehicle is only as strong as its weakest part. A wheel with hub spokes and felloes made from the strongest wood, if the wood is sawed across the grain, has little strength. The "Split Hickory" line of vehicles, as their name indicates, is constructed of SPLIT hickory—NOT sawed—and is of greatest strength and endurance and uniformly strong in all its parts. To obtain these splendid, strong and stylish vehicles, send to Station 6, the Ohio Carriage Mfg. Co., Cincinnati, O., for complete illustrated catalog. Their prices are low, quality high, and their 30 days' free trial offer is genuine and bona fide. Please mention the American Bee Journal when writing them.

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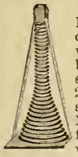

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We can furnish these jars, f.o.b. Chicago, at these prices: One gross, $5.00; two gross, $4.7‾ a gross; five or more gross $4.50 per gros
If u try them once you will likely use no other kind of top or sealing arrangement for honey ars.
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That covers the whole Apicultural Field more completely than any other published, send $1.20 to
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HONEY AND BEESWAX
MARKET QUOTATIONS.

CHICAGO, Jan. 9.—The demand is not more than usual; hence stocks are sufficient, especially as Cuba has now comb honey on this market. This is a new source of supply, and is a factor that must be reckoned with, as it obviates the necessity of laying in a stock during the summer and autumn to draw from in the winter and spring months. The best grades of white comb sell at 15@16c per pound, with travel-stained and light amber, 13@14c; darker grades, 10@12. Extracted, 7@8c for white, and 6@7c for ambers. Beeswax steady at 30c.

R. A. BURNETT & Co.

ALBANY, N. Y., Jan. 7.—Honey demand and receipts light. We quote white comb, 15 cents; mixed, 14c; buckwheat, 13@14c. Extracted, white, 7@7½c; dark and buckwheat, 7@7½c. More demand for buckwheat than any other here.

H. R. WRIGHT.

KANSAS CITY, Dec. 20.—Market steady at quotations. We quote fancy white comb, per case, 24 sections, $3.50; No. 1 at $3.40; No. 2 white and amber, $3.25. Extracted, white, per pound, 7@7½c; amber, 6@6½c. Beeswax, 27@30c.

C. C. CLEMONS & Co.

CINCINNATI, Jan. 7—The demand for all kinds of honey has fallen off considerably in the last few weeks, owing to the many other sweets offered at this season of the year. Lower prices are no inducement to increase the consumption, as the demand is not there, and will not be until about the end of the month; consequently it is folly to offer at lower prices. We quote amber extracted in barrels at 5¾@6½c; white clover and basswood, 8@9½c. Fancy white comb honey, 16@17c; lower grades hard to sell at any price. Beeswax firm at 29@30c.

THE FRED W. MUTH Co.

NEW YORK, Jan. 23.—Demand for comb honey quiet on all grades, and prices show a downward tendency. Supply quite sufficient to meet demand, if not more so. We quote fancy white at 15c; No. 1, at 14c; No. 2, at from 12@13c; dark and buckwheat, at from 11@12c.

Extracted also quiet with abundant supplies with the exception of white clover. We quote white at 7c; amber at 6½c, and dark at 6c. Common in barrels from 60@65c per gallon.

Beeswax firm at from 29@30c.

HILDRETH & SEGELKEN.

CINCINNATI, Jan. 20.—The demand for comb honey has fallen off, which in general happens right after the holidays, although prices rule as before: White clover, 15½c; extra fancy water-white, 16c; no demand for lower grades. Extracted honey is in fair demand, and sells as follows: Amber, in barrels, 5¼@5½c; in cans, 6c; alfalfa, 7½c; white clover, 7½@8½c. Beeswax, 28@30c.

C. H. W. WEBER.

SAN FRANCISCO, Jan. 14.—White comb honey, 11½@12½c; light amber, 10@11c; dark, 5@6½c. Extracted, white, 6@6½c; light amber, 5@5¼c; amber, 4@4½c. Beeswax, good to choice, light, 26@27½c; strictly fancy light, 29@30c.

The country merchant, representative of trade interests, estimates "entire stock of honey of 1902 in the State at 15 cars," worth 5¾@6c per pound at primary points, subject to a $1.10 freight-rate to the East.

WANTED WHITE CLOVER EXTRACTED HONEY!
Send sample and best price delivered here; also Fancy Comb wanted in no-drip cases.
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Hives, Sections, Foundation,
etc. We can save you money. Send list of goods wanted and let us quote you prices. ROOT'S GOODS ONLY. Send for Catalog.
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Send for our large illustrated catalog, and copy of
THE AMERICAN BEE-KEEPER,
a monthly for all bee-keepers; 50c a year. (Now in 12th year. H. E. HILL, Editor.)
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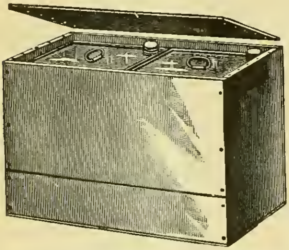
White Alfalfa Honey
ALL IN 60-LB. CANS



A sample by mail, 10c for package and postage. By freight, f.o.b. Chicago: 1 box of 2 cans (120 lbs.) at 8½c a pound; 2 boxes or more (4 or more cans), at 8c a pound. We can furnish Basswood Honey at ½c a pound more. (These prices are for selling again).

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Very fine pure-bred BARRED PLYMOUTH ROCK Chickens and Eggs for sale at very low prices.

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the pains to observe carefully the conditions of the honey market from time to time, you will not fail to appreciate the fact that there is a good demand for the fancy grades of honey at all times and at good prices, while the supply of the medium and poorer grades may be about equal to the demand.

In Poor Seasons
then, you should produce the very best grade possible, because it brings a better price compared with the cost of production, and consequently a greater percent of profit, and
In Good Seasons
when there is a large crop, and a correspondingly lower price, it finds a ready sale, while other grades are slow in moving and are perhaps not sold until the best grade is all disposed of.
Why not then buy
hives and other supplies which are sure to increase the amount produced, raise the grade of honey obtained, and multiply the chances of securing the highest price because of the use of the very best goods obtainable?
"The Best is the Cheapest"
not only holds good in other lines, where the best grade is first sought after at the highest ruling price, but is also true in the selling of honey.

Root's Goods
secured the highest Award at the Pan-American Exposition, and Gold Medal at Paris Exposition.
THE A. I. ROOT CO., Medina, Ohio

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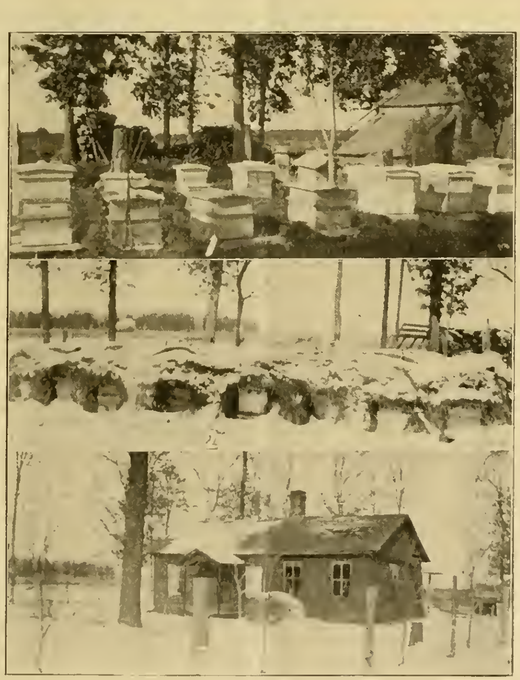
General Manager's Annual Report.
HON. EUGENE SECOR.

A National Honey Exchange.
PROF. A. J. COOK.

AMERICAN BEE JOURNAL

43d Year. CHICAGO, ILL., FEB. 12, 1903. No. 7.

WEEKLY



APIARY OF C. LINDBLOM, OF LAKE CO., ILL.
(See page 101.)

THE AMERICAN BEE JOURNAL

PUBLISHED WEEKLY BY
GEORGE W. YORK & COMPANY
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Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

EDITOR,
GEORGE W. YORK.
DEPT. EDITORS,
DR. C. C. MILLER, E. E. HASTY, EMMA M. WILSON

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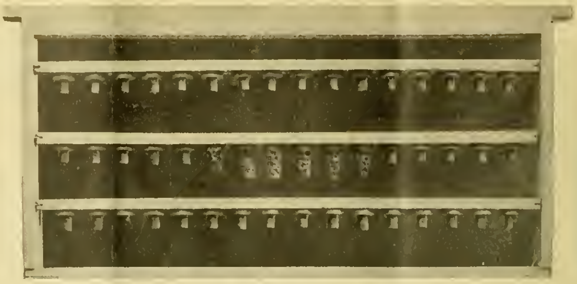
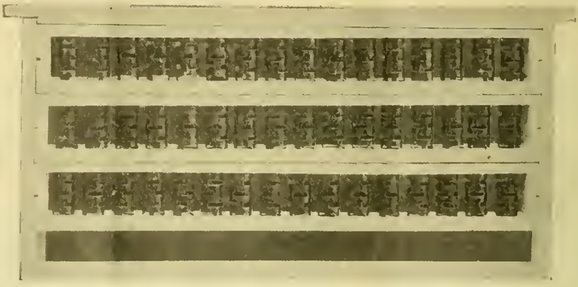


CELL-CUPS AND FINISHED CELLS.



CAGES OF QUEEN EXCLUDING METAL.

Stanley Queen Incubator and Brooder

An Arrangement that Allows the Bees Access to the Cells and Queens at all Times.

(Patent Applied for.)

One of the greatest objections urged against a lamp-nursery, or any kind of a nursery where bees are hatched away from the bees, is that the cells and their inmates are robbed of the actual care of the bees. When the bees have access to a cell, and the time approaches for the queen to emerge, the wax over the point is pared, and, as the queen cuts an opening through the cell, and thrusts out her tongue, she is fed and cheered in her efforts to leave the cell. A queen hatched away from the bees loses all of this food, cheer, and comradeship; and, until introduced to a nucleus, or full colony, has not the natural food that she would secure were she among the bees.

All of these objections are overcome by an invention of Mr. Arthur Stanley, of Lee Co., Ills. Mr. Stanley makes the cell-cups according to the directions given in Mr. Doolittle's "Scientific Queen-Rearing," sticking the base of each cell to a No. 12 gun-wad. By the use of melted wax these wads, with the cell attached, are stuck, at proper intervals, to a strip of wood exactly the length of the inside width of a Langstroth brood-frame. Two wire staples driven into the inside of each end-bar, slide into slots cut in the ends of the cell-bars, and hold them in position.

The process of transferring larvæ to the cells, getting the cells built, etc., have all been described in the books and journals, and need not be repeated here. When the cells are sealed they may be picked off the bar (still attached to the gun-wads); and right here is where the special features of the Stanley process steps in. Each cell, as it is removed, is slipped into a little cylindrical cage, made of queen-excluding zinc, the cage being about two inches long, and of such a diameter that the gun-wad fits snugly, thus holding the cell in place and stopping up the end of the cage. The other end of the cage is plugged up with a gun-wad. Long rows of these cages, filled with sealed cells, are placed between two wooden strips that fit in between the end-bars of a Langstroth frame are held in position by wire staples that fit into slots cut in the ends of the strips. To hold the cages in their places, holes, a trifle larger than the diameter of the cage, are bored, at proper intervals, through the upper strip, thus allowing the cages to be slipped down through the upper bar, until their lower ends rest in corresponding holes bored part way through the lower bar.

A frame full of these cages, stocked with cells, may be hung in a queenless colony, and will require no attention whatever except to remove the queens as they are needed. The workers can freely pass into and through the cages, cluster upon the cells, care for them, and feed the queens after they hatch, exactly as well as though the queens were uncaged.

These cages are unsurpassed as introducing cages, either for fertile or for virgin queens. The bees are not inclined to attack a queen in a cage to which they can enter, yet they can surround, caress, and feed her. They can become acquainted with her, and give her the same scent as themselves. When desirable to release her, one end of the cage can be stopped with candy, and the bees allowed to liberate her by eating it out.

By putting food in one end of the cage, a queen may be kept caged, away from the bees, the same as in any other cage.

Price, $5.00, by Express, Or with the American Bee Journal one year—both for $5.50.

⁂

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ESTABLISHT IN 1861
AMERICAN BEE JOURNAL
THE OLDEST BEE-PAPER IN AMERICA

43d YEAR. CHICAGO, ILL., FEB. 12, 1903. No. 7.

Editorial.

The Crucial Time of Wintering is yet to come. The novice often congratulates himself along in January or February that his bees are wintering so well, only to find later on that before settled warm weather comes many of his colonies are dead, and those that remain are badly depleted. A week toward the close of winter will show more dead bees than a month at its beginning, sometimes twice as many. It is not well to crow before you are out of the woods.

◆

Shaken Swarms in England.—The British Bee Journal does not boil over with enthusiasm with regard to shaken or brushed swarms. It says:

> "We fail to see any improvement in, or much, if any, practical difference between the 'new dodge' and the well-tried methods of making artificial swarms practiced in this country for many years past."

Indeed, it seems to think they have something even better there. That "one better" plan will probably be given in the said journal, when it will be a pleasure to produce it in these columns.

◆

Taking Out and Returning Bees to Cellar.—Is it desirable, when a favorable day comes, to take bees out of the cellar in winter and then return them after a flight? Naturally one would suppose that giving the bees a chance to fly and relieve themselves would leave them in better condition to endure further confinement. But actual trial seemed to show that bees thus treated were rather worse than better for it. It was generally agreed that after having been out for a flight the bees did not afterward settle down in the same quietude as before their flight.

But the matter has again become unsettled because of the report of the A. I. Root Co., that in the winter of 1901-2 they took out colonies for a winter flight and then returned them with apparently good results.

It is just possible that the former view is incorrect, and as the matter has a very practical bearing it would be well if many who winter their bees in cellars would put it to the test. In the vicinity of Chicago there has been no day warm enough for bees to fly since some time in the middle or latter part of November, and it is possible that such a day may now come any time. The same is probably true throughout most of the large territory where cellar-wintering prevails. When a good flight-day comes let a certain number of average colonies be taken out and then returned in the evening, or, at most, not more than a day or two later. Then note whether the colonies so treated appear better or worse than the others after the season has fairly opened.

If the bees can be relieved by a flight before settled weather comes, it will be well to know it and to act accordingly. Those who believe in the practice may well ask why it should be that a winter flight, or several of them, should be conceded on all hands to be a good thing for bees wintered in the open, if the same thing is bad for cellared bees. But if further experiment should only result in re-establishing more firmly the belief that it is better to leave bees in the cellar until they can come out for good, it is well for us to know the fact.

This journal will be glad to receive reports from any who may experiment along the lines indicated.

◆

Moving Hives with Open Entrances has been practiced by some and mentioned approvingly, but H. H. Hyde says, in the Progressive Bee-Keeper, that after testing it to a certain extent he does not approve of it. A good deal of emphasis can be read into the last part of his sentence when he says, "It might work very successfully for a time or two, but oh, the time that it does not do so!"

◆

Right Bees for Queen-Rearing.—Swarthmore, in Gleanings in Bee-Culture, says that the bees of the best age are those which are engaged in the daily play-spell. He captures these at the time of their playing. An ordinary section-super has wire-cloth nailed over it, and this is placed in front of the hive to catch the playing bees. Then a thin board large enough to cover the super is slipped down between the super and the hive, and the imprisoned bees can then be used at the will of the operator.

There may be just a little question as to the correctness of his position that there is any serious objection to having been too young for queen-rearing. A bee that has not been out of the cell an hour may not do much in the way of nursing, but it will be getting older all the time, and it is possible that it may do its share when not many hours old.

◆

Discharging Feces in the Hive.—Do healthy bees discharge their feces in the hive? The general opinion has probably been that during winter confinement bees never discharge their feces in the hive until the intestines become so distended that their contents can no longer be retained, when the bees might be considered in a more or less diseased condition.

Along with this view it has generally been held that the discharges were always more or less liquid in character. The late S. Corneil, of Ontario, stoutly held, and gave ocular demonstration to substantiate his belief, that at least sometimes the discharges were dry. Some authorities in Europe have held the same opinion, maintaining that under favorable conditions bees discharge their feces from time to time in a dry state in the hive, and that careful examination of the debris on the floor of the hive would demonstrate the truth of this belief.

The practical bearing of this matter is that if it be true that bees in a perfectly healthy state do void the contents of their intestines from time to time in a more or less solid form, then if the right conditions can be maintained there need be little anxiety as to long confinement, and little need for a flight till warm weather comes. In any case no harm can result from trying to maintain the conditions favorable to the frequent voidance in a dry form of the contents of the intestines. Chief among these conditions are pure air and the proper temperature.

◆

National Organization is not looked upon with rose-colored glasses by H. H. Hyde, judging from an article written by him in the Bee-Keepers' Review. As objections to success are named: Unwillingness of bee-keepers to unite with the organization; dishonesty of members; expense of operation; and the fact that to succeed the combine must "do away entirely with wholesale dealers in honey, and must sell to the retail merchants entirely."

The writer naively says that he has personal experience as a large buyer and shipper, thus appearing to be in the class of wholesale dealers, and his statement that doing away with wholesale dealers is one of the difficulties in the way of success of a national organization gives rise to the question whether the wish may not be father to the thought. The organization, however, will suffer most, in the judgment of Mr. Hyde, from "professional grumblers who take delight in picking a flaw, and in causing trouble in general."

◆

Gathering Statistics is one of the things more or less talked about just now. Some think the National Association should do the work. Others think it might be done by the proper department of the National Government. Is it not possible that there might be some sort of co-operation. Gathering statistics involves expense. If we can have Uncle Sam foot the bills, in whole or in part, and thereby have good service, it would be a desirable thing.

One consideration is that the Government is already in the business of gathering statistics. It has experience in that line, and it has the proper machinery for the work. That being the case, it looks pretty clear that the Government could do this *added* work at less expense than could another organization which would gather just one line of statistics.

The question then arises whether it is possible for the National Bee-Keepers' Association to do the work in a more satisfactory manner itself, and, if so, whether that increased efficiency would be worth all it would cost. The subject is open for consideration, and these columns are open for its discussion.

Weekly Budget.

THE SIXTH ANNUAL REPORT of the General Manager of the National Bee-Keepers' Association, for 1902, reads as follows:

FOREST CITY, IOWA, December, 1902.

To the Members of the National Bee-Keepers' Association:—

The past year has been a busy one for the General Manager. Bee-keepers seem to have more trouble with their neighbors than formerly. When the country was sparsely settled, and life was not so strenuous as at present, it was a rare case when neighbors sought to restrict the acknowledged right of the bee-keeper and honey-producer. But the severe competition in all lines of business, and the crowding of people into towns and cities, have developed a selfish spirit which crops out on many occasions.

But with one exception, no *serious* legal conflicts have occurred. The past decisions of courts establishing and confirming the rights of bee-keepers are of great importance whenever threats are made or actions begun to determine the legal rights of our members. Many of these decisions have been briefed and printed in pamphlet form for use in just such emergencies. Whenever a member gets into trouble because of his bees, and is threatened with damages, or ordered to remove them, the printed matter we have is sent to him or his attorney, and in a majority of cases the matter is dropped without further proceedings. It has been my practice not to encourage litigation. If I have reason to believe from the statement of a case that the bee-keeper is at fault, that he has so managed his bees that they have annoyed his neighbors needlessly, I do not encourage resistance to reasonable authority, but endeavor to have him reform his methods and avoid trouble. Bee-keeping is respectable, and I would have it respected through a proper system of management and the high character of its followers.

The most import case,which has been referred to the General Manager during the past year was one from Minnesota. Mr. V. Shebat, of Wabasha County, wrote me in July that he was likely to get into trouble on account of his bees, stating the case in a very clear, business-like manner. I sent him such advice and help as I thought necessary. In a hotly contested case which followed he was *triumphantly vindicated*. He was so grateful for the assistance rendered that he wrote the following to the American Bee Journal, which I hereby copy, as it states the matter fully, and is of enough importance, perhaps, to warrant the use of the space it occupies.

STATEMENT OF MR. SHEBAT.

"I desire to say a few words through the American Bee Journal to the bee-keepers of America.

"I have been a member of the National Bee-Keepers' Association for 12 years, and for more than 13 years have kept about 60 colonies of bees on a lot that I own here, and have never had any complaint made to me about my bees doing any damage or being a nuisance until this summer.

"A large church is situated on the corner opposite the lot on which my bees are located, but no complaint was ever made that they annoyed or injured any one. This summer a large church-school for girls was commenced on the lot adjacent to mine, and a city ordinance was manipulated through our city council declaring it a misdemeanor for any one to keep bees in our city, 'within 600 feet of any church, school-house, or other public building, or within 300 feet of any dwelling in said city.' This ordinance was passed in the latter part of July, and within a few days thereafter two actions were begun against me under said ordinance, and one under our State law, which declares, 'any act or commission which injures, annoys, or endangers the comfort, repose, health or safety of any considerable persons, a public nuisance.' These were all criminal actions, and I was arrested in each case.

"The case under the State law was virtually abandoned for lack of evidence, and I was declared not guilty, but the case under the new city ordinance was prosecuted with bitterness and venom. The trial was in our recorder's court, before a jury, and lasted the whole of one day.

"My attorney, Col. J. T. Bowditch, defended me on the following grounds, viz.:

"1st. That the ordinance was not authorized by our city charter.

"2d. That the city council had no power to make a nuisance of any act by passing an ordinance against it, unless the act itself was in fact a nuisance.

"3d. That the ordinance in question resulted in taking and damaging property for public use without just compensation to the owner, contrary to the Constitution of the United States and of this State; that it abridged the natural rights of private citizens; that it was unreasonable and unjust.

"4th. That if the keeping of bees contrary to the terms of this ordinance was a nuisance at all, it was a private nuisance, for which all persons injured thereby had their redress in the courts, and was such a nuisance as could not be regulated by any general ordinance or law.

"These were the main points of my defense, but, of course, each was greatly elaborated by my attorney.

"I am happy to say the jury returned a verdict 'Not guilty,' and I have since received the congratulations of many bee-keepers on the happy ending of the vicious fight that was made against me.

"My chief object in writing this communication is to thank the National Bee-Keepers' Association publicly for the valuable aid it rendered me in this fight, and to impress upon all bee-keepers the benefits to be derived from belonging to such an organization.

In the beginning I informed the officers of the Association (the General Manager) of the passage of the ordinance and the danger threatened. *They at once forwarded to me valuable briefs for the use of my attorneys, and suggestions how to proceed if I should be arrested. My attorney says the briefs were of the greatest assistance in preparing my defense, that, in fact, they lightened his labors fully one-half.*

After the case was decided I sent to the General Manager, Eugene Secor, a statement of the costs against me, and also a statement of the costs I had incurred in defending myself. I at once received a check for $40, to pay a part of the expenses I had been put to. Surely, this is an Association worth belonging to, and it seems to me we ought to do all in our power to support and aid any institution that does as much for us as the National Bee-Keepers' Association.—V. SHEBAT."

Quite a number of other appeals for help and advice have been received, but none of them required any financial aid. The printed matter and letters were all that they required.

The correspondence and the routine work of the office are considerable. Indeed, the duties have been more burdensome than I felt like carrying, considering the unjust criticism of a few ambitious members. In my last annual report I asked to be relieved, and, later, tendered my resignation, but was prevailed upon to serve out the present year. I now repeat that I wish the voting membership to elect my successor.

In severing my official relationship with the Association, perhaps the friends will allow me space to call attention to some things that have been undertaken or accomplished during my incumbency.

When the Association was reorganized in 1896, it commenced business without funds and without prestige. I was its first and only General Manager. Through the hearty support and indefatigable labors of many loyal and influential friends, it has grown from zero to nearly a thousand members; and, although a good deal of money has been spent in defense of bee-keepers, and to advance their interests, the financial statement submitted herewith shows its healthy condition. It is no boast to say it is *the largest and most influential bee-keepers' society in the world*, and is doing work that no other Association attempts since the voluntary withdrawal of the old "Bee-Keepers' Union," under the leadership of that successful manager, Thomas G. Newman.

Here is a statement of some of the more important things accomplished or attempted by this Association during the last five years:

In 1898 a good deal of time, energy and money was spent in promoting *Pure Food Leglislation*, and in trying to prevent the rescinding of a classification rule by railroad authorities in regard to shipping bees.

The same year an attempt was made by the city authorities in an Illinois town to remove all bees from the corporation. This was prevented by help of the Association.

In 1899 the Association attempted to stop the sale of adulterated honey in Chicago, and spent $300 therefor. While the suits were not successful, the publicity which the suits brought about educated the people to such a degree that an Illinois Pure Food law was passed the next year.

A number of bee-keepers were also successfully aided by advice and help from the Association.

In the year 1900 the celebrated Utter vs. Utter case was successfully fought out, and the court rulings and decision will be valuable as a precedent whenever quoted in like cases.

The same year a case testing the Pure Food Law of Michigan was brought against a retailer of adulterated honey, and the party *found guilty and fined*.

During the year 1901 another important suit was determined in Rochester, N. Y., fully testing the right to keep bees in cities. (The City of Rochester vs. Taunton.)

These cases, in addition to the many settled out of court through the efforts of the Association, and, therefore, never heard of, will inform the new members what the organization has been trying to accomplish.

It has also published for reference and distribution wherever needed, the following pamphlets and folders:

1st. BEES AND HORTICULTURE.—A 14-page pamphlet (2d Ed.) in which is brought together the latest and best thoughts on the value of bees to the fruit-grower, danger and uselessness of spraying during bloom, etc., endorsed by leading editors and agricultural writers.

2d. THE CITY OF ROCHESTER VS. TAUNTON:—A brief of the law case above referrred to.

3d. A NEW YORK SUPREME COURT CASE defining property in swarms.

4th. A NEW YORK CASE as to the liabilities of bee-keepers for injuries done by bees.

5th. THE WIDELY QUOTED ARKADELPHIA CASE successfully fought by Mr. Newman as to the rights of bee-keepers.

Newspaper articles, the tendency of which was to prejudice the public against the use of honey, written in ignorance or by sensational reporters, have been replied to, and in many cases satisfactory retractions secured.

Members of Congress and chairmen of important committees have been asked to favor and promote pure food legislation with a view to stopping the sale of glucose syrup under the guise of honey.

In this, my final official report, I wish to acknowledge my obligation to many friends and loyal supporters, and to express my thanks for kind and encouraging words. But I am firm in the conviction that it is time for me to slacken the speed of over-driven machinery, and turn the affairs of the Association over to a younger or more vigorous man.

I have had no conflict with the present Board of Directors, nor with any of the Association officials. The utmost harmony has prevailed in our deliberations. I feel grateful for the confidence reposed in me, and the unceasing loyalty shown by them.

Financial Report.

RECEIPTS.

Amount on hand at last report	$ 718 67
Received for membership fees during year	546 50
Total	$1,265 17

DISBURSEMENTS.

Printing last year's report, etc., not in last statement	$ 41 15
Paid George W. York printing Buffalo's Convention Report	100 00
Paid for defense of Mr. Shebat	40 00
Paid for 1000 buttons for members	50 60
Paid envelopes, postals and stamps used	60 72
Paid letter-heads for Association	5 25
Paid pamphlets, briefs, etc	28 76
Paid use of piano at Buffalo Convention	6 00
Paid legal counsel	10 00
Paid stenographer and clerk	15 00
Paid printing this report, ballots, names	22 00
Salary, 15 percent of amount received for memberships	81 97
Balance on hand	803 72
Total	$1,265 17

NOTE.

If it is observed that the above item for membership fees is out of proportion to the number of names, it is stated in explanation:

1st. That a large number joined through local or State associations at 50 cents each.

2d. That I have not received a cent of the money paid to Mr. Abbott by the members, although their names are on the list,

3d. The untimely death of the secretary, Dr. Mason, probably accounts for his not remitting money in his hands for dues collected at Denver and at other times. He sent list of names in September, but no money.

Respectfully submitted,

EUGENE SECOR, *Gen. Mgr. and Treas.*

There are only two comments that we wish to make on the foregoing, viz.:

Instead of $300 having been paid on the Chicago adulterated-honey cases in 1899, it was $200. And, even then, some not familiar with the details thought it was a large sum to pay. We know that the same work, if done by some other attorney, would have cost more. But it was money well spent, we think.

Second, one might naturally infer from Mr. Secor's Note 2, near the close of his Report, that Mr. Abbott was still holding the money he received for annual dues last summer, after being elected General Manager by a majority of the Board of Directors. But such inference would not be true, as Mr. Abbott sent by check the net amount in his hands to Secretary Mason. So Mr. Abbott can not be blamed if the General Manager did not receive that money. According to the Constitution of the Association, the Secretary, as well as the General Manager, is authorized to receive annual membership dues.

◆

MR. GEORGE W. FORBIS, a well-known farmer living in Howard Co., Mo., has just discovered that he has been living in a house that contains honey. Six years ago a swarm of bees settled between the weather-boards and plastering of his residence. Lately he decided to investigate, and on taking away the weather-boarding, found that the bees had made a solid wall of honey. More than a hundred pounds of the finest quality of sweetness was taken out. Some bees seem to like large hives. These must have been something like the colonies Dr. Gallup has been writing about, and perhaps even the workers of this particular colony had the "missing link!"

◆

THE APIARY OF MR. C. LINDBLOM appears in three views on the first page. He wrote as follows concerning it:

I take pleasure in sending you three pictures. No. 1 shows my bees on the summer stands. No. 2 presents the apiary in winter quarters, and No. 3 is my dwelling-house with two small colonies packed like the rest, but on the south side of the house.

In packing my bees, I first put two sticks across the frames, next two thicknesses of burlap, then the super on the hive filled with dry leaves. The cover is then put on, when the first part is done. Next I put on a lot of slough-grass all over and between the hives about 2 feet deep, and in this way I have wintered my bees nine years, and lost only 6 colonies. I winter an average of 12 colonies, always giving them plenty of feed, and have the hives face the south. C. LINDBOLM.

◆

HE UNDERSTOOD HIM.—Fritz, a German lad, and little Tom were fond of each other, although neither could understand what the other said.

"Why, Tommy," said his father, "your playmate does not speak English, does he?"

"No," said Tommy; "but when a honey-bee stung him yesterday he cried in English, and I understood him."

Convention Proceedings.

Chicago-Northwestern Convention.

Report of the Chicago-Northwestern Bee-Keepers' Convention, held in Chicago, Dec. 3 and 4, 1902.

BY OUR OWN SHORTHAND REPORTER.

The meeting was called to order by Pres. York, at 11 a.m., Dec. 3, and Secretary Moore offered prayer, who afterward read the minutes of the previous meeting, which were approved.

Pres. York then introduced the following bee-keepers from a distance: W. Z. Hutchinson, from Michigan; Mr. and Mrs. Pickard, Mr. Wilcox, Dr. Nussle, Mr. Whitney, Mr. Morrison, and Mr. Clute, all from Wisconsin; Mr. Niver, from New York; Morley Pettit, from Canada; Huber H. Root and Mr. Simon, from Ohio; Mr. Watts, from Indiana; and Mr. Armstrong, from Iowa.

Pres. York—Also Mr. Baldridge, one of the oldest bee-keepers in Illinois. We are always glad to have him here. How far back does your experience take you, Mr. Baldridge? Don't be afraid to tell because you will give your age away.

Mr. Baldridge—I can't tell exactly; before the war.

Pres. York—Spanish War?

Mr. Baldridge—Civil War.

Pres. York—Before two wars. I am sure we are going to have a good meeting, and as others come in we will have the room crowded. I received a letter from Canada; the writer of it wanted a copy of our program, and I told him we had no program for this convention. We don't need it here. They seem to need a program over in Canada. They have it, anyway. It was Mr. Pettit, and he is with us. We simply ask questions and discuss them; we all take part in making up the "program," as well as discussing the questions.

On motion, a committee was appointed, composed of Mr. Horstmann and Mr. Clute, to meet Mr. France at the station when he should arrive at 1:15 p.m., and escort him to the convention.

F. Wilcox—May I be permitted to say a few words before Mr. France is introduced, because I may not have another opportunity? In the letter from Mr. France he speaks of bringing free copies of his foul brood volume for distribution. I know something about the preparation and publication of those bulletins, properly called. He prepared it for publication, and upon inquiry found he could get it published for about half the price by local papers, and elsewhere, and then attempted to draw pay from the State under the general appropriation for doing it, and failed. He is not a politician, and did not understand the process for securing pay for these bulletins, so he had to bear the expense out of his own pocket. I thought I might remind those who receive one of them, that it comes entirely from Mr. France, and not from the State of Wisconsin.

Pres. York—We are glad to know this. We will appreciate it all the more as a personal gift from Mr. France.

Mr. Moore read the Treasurer's report, which was approved, and showed a good balance on hand.

Pres. York—I suppose we are one of the "best heeled" bee-keepers' associations. I think most of them have to take up a collection. We used to do that, but we have gotten beyond that, and now have some money in the treasury.

Sec. Moore—I suppose all of you know by this time that Dr. Mason died under very distressing circumstances. He was one of the best known bee-keepers in the world, and beloved by every one who knew him. I move that the chair appoint a committee of three to draw up resolutions of condolence to his family, and such other matters as should properly come under the work of such committee, and present it to the Association when they get it complete, either this afternoon or to-morrow, for adoption.

Messrs. Hutchinson, Root, and Wilcox were named as the committee.

Pres. York—We now come to the program. I believe I said we didn't have any, but we have an order of business.

Mr. Horstmann—I move that we have a few minutes recess, so as to give the members a chance to pay their dues. Carried.

Pres. York—Before we have this intermission I would like to say that the dues are one dollar, and this dollar pays for your membership not only in this Association, but also in the National. The dues of the National are also one dollar, but if you join this one you become a member in both Associations for the one dollar, where otherwise you would have to pay a dollar to join the National and another dollar to join this Association. I hope every bee-keeper who comes here will become a member of this Association.

After a short recess the convention proceeded.

Pres. York—I would like to appoint a committee to distribute slips of paper for questions. This is the way we make up our "program." Mr. Niver and Mr. Green will act on that committee. Now, if you have any questions you would like to ask and have discussed, write them on the slips of paper, and they will be collected a little later, so we will have some questions to go on with.

Mr. York—I have four questions we will begin on while you are writing others, and we would like to have each one who wishes, and will, take part in these discussions. I do not like to call on any one, but unless we get started promptly we will have to start by calling on some one. These questions were sent in by mail. The first question is this:

CARRYING DRAWN-OUT SECTION BY RAIL.

"Is it possible to carry by rail quite a distance, sections containing foundation which has been drawn out by the bees and emptied of honey, without damaging the same? If so, how should they be packed?"

Pres. York—Who has had experience in shipping sections containing foundation which has been drawn out by the bees and emptied of honey? How can you ship without this comb breaking out of the sections? Has any one done anything of that kind?

Mr. Wilcox—There will be no trouble whatever if the weather is sufficiently warm. All you want is to ship them in hot weather.

Dr. Nussle—I would like to have them shipped packed in the super as they are when they are drawn in the summer. Heat them up and put in the super, and you can ship any distance, winter or summer.

Mr. Hutchinson—I don't see why there should be any difficulty in shipping these any more than honey. The bees can not draw out that foundation with honey without connecting it at the top and partially at the sides, and we have shipped such honey, and the thing would be the same. I don't see the point the questioner wishes to make—why foundation can not be shipped as well as honey.

Pres. York—I suppose the questioner has what Dr. Miller would call "bait-sections." Has any one else anything to say on that question? Is there anything further that can be said?

Mr. Pettit—If the sections have been kept over winter in a cold place, and were cracked, I should not think they could be shipped at all; but otherwise they would ship more easily and safely than if they had honey in.

Pres. York—Mr. Wilcox suggests that a gas stove be sent along with them!

Mr. Simon—What Mr. Pettit has said is very true, that the comb is not more susceptible, or not as much susceptible, to breakage without the foundation, or without the filling of the honey, as it would be with it; therefore, I should consider it perfectly safe to ship them in almost any kind of weather without the honey in it as well as with it. Do you understand what I am driving at?

WHAT COLONIES TO COUNT AS PRODUCERS.

"When finding the average amount of honey produced by a certain number of colonies, should the colonies which produce just a few pounds—say two or three—be counted as honey-producers?"

Mr. Hutchinson—Count every colony that produces any honey.

Mr. Wilcox—If I am counting up the average per colony, I take no notice of the honey produced from a young swarm, but I count all colonies even if they don't give me a single pound, in fixing the average per colony.

Pres. York—How does Mr. Whitney do? Did you ever get an average? How do you make it?

Mr. Whitney—I don't know any other rule than that suggested by Mr. Wilcox. I usually count mine spring count—average spring count. Last season my average spring count was a little over 103 pounds from 33 colonies.

Pres. York—Comb or extracted?

Mr. Whitney—Comb. They gave me nearly 3500 pounds from 33 colonies.

Pres. York—Is there any other view on this, or do we all agree that the proper way is to count all the colonies? If so, we will go to the next question.

COUNTING THE AVERAGE PER COLONY.

"In estimating the number of sections produced by a colony, are salable ones alone counted?"

Pres. York—Are they all counted, or only the salable ones? How do you count them?

Mr. Whitney—I would explain my method of counting in answer to that question. I count only such as you can crate and ship away. The unfinished sections I ordinarily put back and let the bees finish them up, or extract them and keep them for bait-sections.

Pres. York—Judging from most of the honey shipped to market, I would say not every one does that way. I have had it come in hardly half sealed, and half filled. Think of sending sections of honey away to market in that condition! Is there any one else who produces comb honey who cares to answer this question? How do they do over in Canada, Mr. Pettit?

Mr. Pettit—We don't count the sections that are not salable, of course. We extract those and count them in with the extracted honey, or use the sections for bait-sections.

Mr. Niver—I have found some who don't have any No. 2 honey at all, in my travels the last two months. Bee-keepers should simply take and sort when they take up a super, and take off as No. 2 all that won't grade No. 1, and put it in the super and set it in front of the hives at night, and let the bees carry it in to fill up their No. 2's so they have only No. 1 to sell. That is quite a nice way, I think. That is, it gives good results.

(Continued next week.)

Contributed Articles.

A National Honey Exchange Outlined.

BY PROF. A. J. COOK.

In a late number of the American Bee Journal I gave what seems to me a fair description of the signs of the times in regard to combination, whether of capital or work and the great importance of co-operation in all lines of work. I there stated that I would in a succeeding article outline what seemed to me a feasible course for the bee-keepers to pursue. This is not visionary or a mere theory. It is indeed what has already proved a success with the citrus growers of Southern California. I need not, however, say Southern California now, because our Citrus Fruit Exchange has already entered and captured central California, and is even gaining a foothold in the northern part of the State. What I give, then, is no theory, it is a sort of evolution. Although the Citrus Fruit Exchange started nine year ago it is to-day an acknowledged success, and all agree that it has been the salvation of a most important industry of our State.

California is peculiarly handicapped in the circumstances attending her fruit industry. We are over 2000 miles from market, and the freight charges on fruit to the Eastern cities are about one dollar a box. We had to compete with Italy and other sub-tropical and foreign nations where citrus fruits were produced. There transportation was by water, and, so, very cheap. Our superior intelligence, energy and enterprise made it possible for us to eclipse them to a marked degree in the quality of the fruit, but with railroads against us, and their determination to "charge all the traffic would bear," it was impossible for us to win success except through co-operation. As a result we have to-day the Southern California Fruit Exchange. By the aid of this the citrus-fruit growers of our section have won a substantial success, and I doubt if any rural industry in the country can make a better showing, despite the great disadvantage of distant market and railroad transportation.

A HONEY EXCHANGE POSSIBLE.

For an exchange in any line to succeed demands a very intelligent constituency. Our citrus growers of Southern California are largely educated men. They read, think, and many had wide business experience before they commenced the work of fruit-culture. Such co-operation as the Exchange implies must be founded upon faith in each other, absence of distrust and suspicion, and a willingness to pay for first-class business talent, what other lines of business are willing to pay, and do pay. Our bee-keepers, to be successful, must read and think. As a general thing the apiarists are a reading, thinking people. If I am right in this conjecture then they will be more free from suspicion and more ready to act upon recognized business principles; freer from distrust and suspicion, and must agree to procure the best business talent and ability, even though they do have to pay what seems an exhorbitant price for it.

THE PLAN OUTLINED.

I feel certain that in time we shall have a national honey exchange. Yet, as in our government relations, the different States will act separately, and each will have its own exchange which in many respects will be quite independent of the others, though all will be organically united and one man of signal ability who is manager of the great national exchange will have general direction over all the subordinate exchanges; that is, the exchanges of the separate States. This general manager would have his headquarters in some great central market, I should suppose probably Chicago would be headquarters for the national exchange.

Of course, this general manager would have his advisers. This might be a sort of executive committee appointed from the various States, and would be composed of men of marked business ability. It would very likely be better to have this executive committee of these advisers of the great business manager made up of the business managers of the different States, in which case, of course, meetings could not be held oftener than annually, and so the business would have to be largely by correspondence. In these days of typewriters and telephones this would be no serious handicap.

The work of this general manager would be chiefly distribution and marketing. He would have his ear constantly to the ground, and would know exactly the status of all the markets of the country, and thus he would direct from the different States the sending of honey to market in a way that the best distribution would be accomplished. This would make glutting of the market an impossibility. He would have charge of appointing salaried salesmen in all the great cities, who would, under his charge, distribute the honey as the needs of the various sections require. They would also look out for the distribution among smaller places in the near vicinity of the city or town. They would also be constantly developing markets.

These various salesmen would be in constant communication with the head manager, and thus he would know through them the condition of the market in all sections of the various States. Thus his office and duties would be much the same as that of the general manager of the Southern California Fruit Exchange. The latter, however, meets his advisers once a week during the busy season, while, as stated above, the general manager of the honey exchange could hardly meet his advisers oftener than once a year.

This general manager ought to be a man of very superior business ability. Such services could not be secured except at a large salary. I should say that $10,000 would be none too much for the right man to fill this place. He should have business instinct and capacity that would more than pay his salary many times over during a single year.

THE STATE HONEY EXCHANGE.

Each State exchange likewise must needs have a business manager, also of unusual business capacity. He would take charge of the exchange for the State, and would, I believe, be the one from the State to advise with the general national manager. He would have advisers also. These should be honey-producers, and should be men of business tact and shrewd business management. The duty of the State business manager would be to keep in close immediate touch with all the county or local exchanges through the State. He would also be in constant communication with the national manager. He would direct the various local exchanges when, how, and where to ship honey, and would arrange all the details. It is possible that it would be wise to give into his hands a portion of the marketing in his own State, which of course would be done only after the closest conference with the national manager. He and his advisers would arrange all the details of packing, grading and shipping, and in case it was found desirable to advance the money to bee-keepers who were unable to wait until the sales were made, he would be the one who would look after the details of this arrangement.

The third wheel in this great system would be the local exchange. Each would have its general manager or superintendent, who might be, and I think should be, the adviser of the State manager. He would be the go-between connecting the State manager with the individual honey-producers. He would also look after the details of the local exchange, such as storing of honey, packing, shipping, labeling, etc.

ADVANTAGES OF THE SYSTEM.

The great advantage from such a system of distribution and marketing would be that of all such combinations—the producers would have something to say as to the price which should be received for their product, and thus would not be called upon, or at least would not be compelled, to take less for their product than the actual cost of producing it. At present the bee-keepers, like all other agriculturists, have nothing to say regarding what their wares shall bring in the market, no more than they have regarding the price of such articles as they may wish to purchase. This seems a great wrong, and by such combination as this exchange would secure, the agriculturist can win a right which in all the world's history thus far he has been deprived of.

Again, this system of marketing would enable the producer to arrange an intelligent and wise distribution, so that while no section was crowded by a surplus of his product, all sections would at all times be supplied with a sufficient amount for the needs of all the people. Heretofore there has been no system at all in this matter of distribution of products. Who can doubt but that a wise reform in this matter would be fraught with the greatest results to any industry that should secure it?

A third advantage would be the fact that the honey would be all put up and graded in a uniform and excellent style, so that buyers would be attracted as they cannot be where much of the product is sold in a form that is neither attractive nor economical. The packing could also be done very much cheaper. The grading also would be perfect, and thus every man's product would be sold on its own merits. This improvement in style of packing and this thorough grading would of necessity increase the demand for the product everywhere, and would result in greatly increased sales. The reduction in cost of packing has been about one-third in the fruit exchange. That it would be less in the honey exchange I see no reason to believe.

Still another advantage from this system of doing business would be a combination in the purchase of supplies, and thus all supplies would be bought at uniform rates, would be uniform in style, and all would be of the very best style, pattern and finish. Here again the citrus fruit exchange has made a great advance over the experience of the orange and lemon growers before the association was founded.

In the case of the Citrus Fruit Exchange the cost of marketing, including telegrams, all clerk hire, everything, is a little less than three percent, and is done much better than it ever could have been through commission men. I see no reason why the same large gains may not accrue to the bee-keepers if they can only consent to form such an organization as is outlined above.

Again, the losses during the nine years of the history of the California Citrus Fruit Exchange where about thirty million dollars worth of fruit has been sold, has been less than one-fortieth of one percent. We sometimes hear it said that farmers can not do their own busines. I would like to know of a business firm or any organization or association, the country over, that has done business of such magnitude with such an infinitesimal loss as the Citrus Exchange.

If our bee-keepers will only consent to act together, and will secure men of that large business capacity which will enable them to run successfully the large undertaking, I see no reason why an abundant success may not be secured. The scheme is a grand one, and must develop slowly. California, Colorado, and Arizona, ought soon to be ready to carry it out, and with them as examples we may hope that the other States will soon wheel into line.

Forced Swarms—Questions About Them Answered.

BY J. E. CHAMBERS.

ON page 819 (1902) are some questions about forced swarms, in answer to which I will say that it does not matter in the least whether or not they are made before queen-cells are started, for the reason that no swarm should ever be made for the sole purpose of controlling the swarming impulse, when there is no honey-flow, for in the great majority of cases no good results can reasonably be expected, unless there is a good, strong flow right at the time the colony is swarmed, in which case it will not do to wait for cells to be started, for we want to get the bees to work in the supers at once, not even to lose a day's time. And in order to do this, we must work our bees in a way that will bring them up to the flow in the best possible shape for the honey-gathering; and, he who cannot accomplish this will not succeed with the brushed-swarm method. But if you have them in condition, and honey is coming, don't wait a minute. Brush them, cells or no cells. Remember, the main thing is lots of bees and a good, strong flow of nectar. Reinforce them with a second drive in eight days, and again in eight days more, if the flow continues.

I find large starters are best in my locality, and full sheets in sections. No frame of brood is ever needed with me in order to control absconding, however, a comb of brood will do no harm, and in many cases it will have a strong tendency to prevent swarming-out. There is nothing in the idea that a comb of brood must be removed on the second day after it is given in order to prevent swarming-out. I speak of this in my own locality; with others it may be different.

There is always more or less uneasiness among bees that have been brushed, and unless the work is done rightly, they will be apt to swarm-out. However, I don't think there is any more danger of absconding than with natural swarming, provided reasonable care is exercised.

I do not consider that any advantage is to be gained by the use of drawn comb. On the contrary I think it is a big mistake to use it, for the reason that the bees will begin work in the brood-chamber first, if drawn comb is used, and may continue to waste time storing in the brood-nest when they should be at work in the supers; and that very loitering in the brood-chambers may induce swarming. And, again, they always seem less inclined to enter the supers promptly. For this very reason drawn combs are more convenient to cluster on than starters, and the queens will start laying at once, thus occupying a large part of the force in the brood-chamber.

In conclusion I will say, that to get the best results a shallow hive is necessary. It is almost impossible to get the full benefit of the brushed-swarm method with a deep hive, with most of us. Contraction is the word.

Concho Co., Texas.

Apiculture in Germany vs. United States.

BY J. A. HEBERLY.

IT is interesting to note the difference of present-time bee-keeping in Germany and the United States, but it is surprising to see the great variety of hives, different sizes of frames, to hear the loud praising of a particular form of hive by one group, and the equally loud condemnation of the same hive by another group of apiarists, and still all pursue the same object—to induce the bees to store the most honey.

In Germany the hives are not set out singly in the garden or field, but are put into bee-houses. Sometimes it is only a wooden shanty to protect the hives from the weather, with poor light, and bees having access to the interior; more commonly they are bee-tight, single or double walled, mostly of wood, but sometimes of masonry; some are quite ornamental.

In most of them the bees fly to the south only. Usually there are but two tiers of hives, rarely three tiers, for hives are operated on from the rear, styled Dothe or Berlepsch hive, vulgarly called "breech-loader." For this form of hive the bee-house usually has ample light from the opposite side from where the bees have their entrance. For hives operated on from above, the light generally enters from the same side the hives stand, and just above the body of the hives. Generally there is but one tier of such hives, but some, to save expense, sacrifice convenience and put two tiers, one above the other.

Then there are bee-houses called "pavilions," where the bees have their entrance from three or all four sides, with only one tier, providing ample room and light for hives operated on from above. This last is a late type, but quite expensive compared with the pavilion or old, designed for breech-loading hives. These consist of multi-hives for 4 or more colonies side by side with only a division-board between them. The front and two sides are double-walled, on a solid foundation of masonry. Two, and sometimes three, of these multi-hives are put on top of one another, thus forming one side of the pavilion; two more walls of multi-hives at right angle to the first, and the sides of the pavilion are finished. The fourth side of a small pavilion will be taken up by the entrance. In a large one there is room for a few hives on one or both sides of the door, if it is not preferred to put to the side of the door, a tier of drawers for implements, frames not in use, etc. Sometimes a row of drawers is put on the foundation, and multi-hives on top of these, because it is very inconvenient to work when the hives are near the floor. The four sides do not touch each other, there is a space of 6 to 10 inches left in each corner for the windows which are as high as the sides of the pavilion; they are pivoted in the center, the middle on the base and ceiling, so they readily turn on their long axis to the right or left, that the bees may be let out which flew off the combs while being operated on.

A neat flat roof, provision for ample ventilation, and the pavilion is finished. These are quite economical where breech-loaders are in use, costing little more than the single hive would cost, and are quite a nice addition in a garden or park. It is claimed that bee-tight bee-houses and pavilions are nice to work in, when nectar is scarce, without danger of robbing, and that often work can be done that would be impracticable on account of the weather where the hives are in the open air.

Germany.

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

The Bee-Cellar in Winter.

Only two months or so now before those who winter bees in the cellar will be thinking about taking them out.

Are you keeping pretty close watch of your cellar? Does it smell sweet and clean? Bees, the same as human beings, need fresh, pure air, all the time. I am afraid that a good many of the human family do not have it always, and no doubt the bees are often in the same condition.

What do you do when your rooms need ventilation? You open up the doors and windows and let in the fresh air. If the weather is very cold you do not leave them open very long, still you feel you must have fresh air even if it does bring the temperature down for a while. Pretty good plan to give the bees the same treatment.

Queen Laying in January—A Little Beginner.

Did you ever have a queen that started to lay eggs Jan. 10? She has brood in all stages, and she is a young queen of 1892, and was hived June 28. Her swarm was a weak one, so I had her hived in a hive with the entrance all open. Then next the hive got moth-worms. I cleaned her combs and took out the brood, so that the bees could get all eggs of the wax-worms. When that was done, in the beginning of August, she started to lay again, and laid a lot of eggs. When the honey-flow was almost over I started to feed them until they had enough. So I was rid of the moth-worms, and she had built up nicely by fall, with plenty of young bees. Now she has not been fed for two months. January 16 I opened the hive, as I wanted to see whether they had stores enough, and I found they had eggs and brood in all stages. What is the reason she started to lay so early? Our temperature was from 4 to 6 degrees above zero.

I am a beginner in bee-keeping. I get the American Bee Journal and have some bee-books besides. I have never found anything about a queen starting to lay at this time of the year.

I commenced with 2 colonies, then I found one of them was queenless, so I united them, and increased to 7 colonies during the summer, and they are in pretty good shape.

I am a little girl, 8 years old, and I enjoy reading Yon Yonson's letters in the Bee Journal. What has become of him? Was Dr. Miller after him with a sharp stick, or what is the reason he has no more letters in the Bee Journal? E. W. ABEL.

Northampton Co., Pa., Jan. 18.

You don't say whether your bees are outdoors or in the cellar. I judge from what you say that they are out-of-doors.

In cold weather we keep up the heat of our houses by burning fuel, coal, wood, etc. The bees do the same, only honey is their fuel, and it is burned inside their little bodies. The colder the weather the more fuel is needed.

The heat of the cluster must be kept at about 50 degrees. In very cold weather to keep the outside of the cluster at 50 degrees, the inside of the cluster must be very much warmer, and contradictory as it may seem, the colder the weather the warmer it will be in the center of the cluster. After all, that isn't any different from what it is in our homes, for the colder the weather the hotter must our fires be to keep up the proper temperature. So the heat being so great in the center of the cluster it is no uncommon thing for the queens to begin to lay in February, or even in January, when wintered out-of-doors.

They will not begin to lay so early when wintered in the cellar, because there is not so much heat in the center of the cluster.

I didn't know what had become of Yon Yonson, but hoped he was not sick. Many of us, with you, missed his quaint sayings; but he is with us again, I see.

"The Sisters" will be glad to make the acquaintance of a bright little up-to-date bee-keeper only 8 years old, who enjoys reading the Bee Journal. I hope this is not the last time we are to hear from you. I, for one, will be anxious to know how you succeed.

❊ The Afterthought. ❊

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, O.

A NEW HUMORIST.

Our new humorist who has three-year-old workers and ten-year-old queens, look out he doesn't get your scalp hanging at his belt. Page 829.

RELIQUEFYING HONEY IN GLASS JARS.

How to reliquefy honey in little glass bottles without spoiling the labels is quite a problem. *Can* be done in the kitchen oven. Don't! First you know you'll forget and explode a lot of them—and there are too many divorces now. Solar extractor no doubt splendid; but that is just the time of year when few want to reliquefy. Where there is much such work to be done no doubt a huge heating-box, with thermometer inside, would be the thing. Heating arrangements such as would not be liable to run very much too high anyhow. Page 3.

COMBINATIONS, CO OPERATIONS, EXCHANGES, AND "SICH."

I'm like a big dog chained under the hind axle of a big wagon. (Perhaps a small dog would be a more suitable figure.) I hang back awfully and persistently; occasionally I bark; but the wagon goes right on, oft in the precise direction I don't want it to go. What is said on page 6 (1903), for the moment e'enymost made me slack my chain and walk right up under the vehicle. Perhaps the orange and lemon growers endured the business conditions of our fathers as long as they *ought* to. Not sure it was their duty to keep on sending oranges East and getting expense bills instead of cash. Nice—to be able to double their acreage and get satisfactory returns on $11,000,000 worth of fruit. (Let's see, sin has a reputation of looking nice, has it not?) But what shall we do with the claim that they *were* sinning, sinning against wife and babies, in the old competitive way? Competition is sneaking and cruel; combination is soulless and cruel—about the choice between a thief and a robber—and often financially foolish to boot. Wickedness develops so that in time it blinds even a soulless corporation's eyes so it cannot see its own interests. O that impossibilities might melt into possibilities! O that somebody might invent a corporation with a Christian soul inside of it! We'd vote him up to be the brother of the archangel Michael.

SMELTER-SMOKE CONSUMER AND BEES.

Looks like the Utah brethren are hugging a false hope, if they hope anything in the line of smoke-consumers will save their bees much. Smoke-consumers are to save fuel, and to abate the nuisance of falling soot. I fear they do not make the final products of combustion any more wholesome—if indeed they do not make them worse. Chlorine and arsenic still. Carbon becomes carbonic acid, no longer dirty but much worse for animal life. Sulphur and phosphorus become sulphuric and phosphoric acids, more violently harmful than before, but liable to seize on moisture near by and not go so far. If arrangements are made to toss the vapors in a heated condition high into the air, that may help some. Page 5.

SUGAR PER CAPITA.

If our people eat sugar 68 pounds per capita per year, then (considering the number of babies and extreme poor) a good many individuals must eat twice the ration, or 136 pounds. How many ounces would that be per day? About six. I'm aware that I eat even more than that, but it's almost hard to believe it of the other folks. Page 13.

OPEN-AIR COLONY.

An open-air colony of bees in Central Michigan is quite an interesting freak. Of course they couldn't go through the winter alive there. Possible to take the rail into the cellar—but then there would be the difficulty of their lack of honey. I wish very much we could have had that colony carried over somehow, and set back there next spring. Even a few boards laid on the fence till spring rains and winds were over would not deprive them of their claim to be called an open-air colony. Page 21.

POOR MAN AND CAPITALIST—GREEDY MANAGER.

Yes, Prof. Cook, we are no less safe in the hands of the humbler than in the grip of the capitalist—or no? Solomon takes the other side—holds that a poor man when he gets a position to oppress a poor man is like a cloud-burst, that sweeps everything away—has practically no mercy, where the rich oppressor would have *some*. (Prov. 28:3.) It's possible, yes probable, that the masses have risen quite a bit since Solomon's time. But humble little bear, and big, proud grizzly bear—some of us are like way-faring Johnny-cake in the nursery tale. We look at both ruefully; and we won't climb up unto either of their soft, easy-bed tongues until we are absolutely obliged to do it.

And so the one-of-a-thousand manager wants a thousand-and-one salary. Strange. Not in the business for his health, I fear. With both the name and the game of being a greedy grabber for other folks, it's asking too much to expect him to be modest in grabbing for himself. Page 22.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

"Missing Link" in Queens—Iowa as a Honey-State, Etc.

1. On page 56, and other pages in back numbers, Dr. Gallup speaks of the "missing link" in queens. What do you understand such missing link? Is it a deficiency in the female organs that make them non-prolific and short-lived? I have bought quite a number of queens in the last 5 years, and fully $^2/_3$ of them did not live over a year from the time they were introduced, and none of them lived over 2 years; while home-reared queens, reared by natural swarming or

supersedure, will live 5 years. This is no guess-work, I know it to do so.

2. Last September I bought a nice, select queen. She went to laying in a short time, and laid on until cold weather knocked her out, and a few days ago I found her lying in front of the hive, dead, while there were but a few other dead bees thrown out with her. Do you think she could have died from starvation on account of the bees being unable to feed her during the cold snap we had a few weeks ago?

3. How does Iowa rank as a honey-State?

4. What part of the State is considered best?

5. Would it be too cold for a West Virginia man?

6. Which is considered the better State for bees, Ohio or West Virginia? WEST VIRGINIA.

ANSWERS.—1. I am not certain that I know enough about it to give you a satisfactory answer. The "missing link" spoken of by Dr. Gallup seems to be considered something like an umbilical cord. This last is the cord through which circulation of blood is kept up between the parent and the fetus in the womb, and how anything of that kind can take place in a queen-cell is beyond my comprehension. Mr. Doolittle seems to give the matter his endorsement, which is no little in its favor, for Mr. Doolittle is usually very careful in his statements. Scientific men remain intensely silent with regard to it. I don't pretend to know anything about it, and I may be mistaken in my guess, but that guess is that nothing new has been observed at all, and that the whole thing is nonsense.

2. No, it would hardly be of starvation unless the whole colony starved, for the queen is always one of the last in the colony to starve to death.

3. About average.

4. No particular choice.

5. Probably not.

6. About the same.

I have answered those last four questions, without being at all sure, and will be glad to have any one correct me if I am wrong.

Best Location for Bees—Drone-Comb.

1. Which of two localities would you consider the better for an out-apiary, one beside a very large cedar swamp, and the other where wild berries grow fairly abundantly, and where clover would be in reach in moderate quantity?

2. Can one "overdo" it in removing drone-comb during the summer? Would it be a mistake to take away all, or nearly all? ONTARIO.

ANSWERS.—1. I think I'd take the berries and clover, although I don't know much about cedar swamps.

2. Don't worry about overdoing it. The best you can do, there will probably be all the drones reared that you will need. But it would be a good plan to leave some drone-comb in a few of your best colonies, trying to keep drone-comb out of all others. It is just as important to have drones of best stock as it is to have best queens.

Getting Increase and Not Honey.

1. I have 3 colonies of bees, and they have their brood-combs built so unevenly that it is almost impossible to divide them. I wish to increase in colonies, and do not care to produce honey at present. Would you advise me to put new brood-frames with foundation starters in the lower story, and place the brood-combs in the upper story?

2. Will the queen and the worker-bees start to rear in the brood-chamber?

3. Will the nurse-bees take care of the brood in the upper story?

4. Can I do all this, and still increase the number of colonies the same season?

5. When is the best time to make this change?

I have quite a number of basswood trees. IOWA.

ANSWERS.—1. Yes, that plan will work, although it might be better to fill the frames below entirely with foundation.

2. Yes, after the brood-frames are entirely filled in the upper story the bees will build down below.

3. There will be no trouble on that score.

4. The plan proposed will hinder or prevent natural swarming. But when the bees have fairly started in the lower story, then you can set the upper story on a new stand, being sure not to take the queen with it, allowing the bees to rear a queen of their own, although it will be very much better to give them a queen, or at least a sealed queen-cell.

5. About the time bees are working well on white clover will be a good time in your locality. It might be a better plan at this time to give the second story, and to put an excluder between the two stories, being sure that the queen is in the lower story; then removing the upper story to a new stand ten days or so later.

A Galvanized-Iron Honey-Tank.

Will a tank made of galvanized iron do to put extracted honey in to settle, skim, and then draw off into shipping packages? I want to let it remain in the tank only a short time. WISCONSIN.

ANSWER.—I think it would work all right.

Thickness of Top-Bars.

Do you believe that a half-inch thick brood-frame top-bar will tend to prevent the bees building burr-comb on such frames, as well as the ¾-inch top-bar? Which kind do you use? NEBRASKA.

ANSWER.—I do not believe that the ½-inch will prevent burr-combs quite as well as the ¾. Mine are ⅞.

Making Hives—Spacing Frames—Sweet Clover—Filberts.

1. I have some hives to make. How will it do to make them about 13x14 inches, and 14 inches high, with the upper story about 11 inches deep?

2. How far apart should the frames be placed, and what kind of lumber should they be made of?

3. Will sweet clover bloom the same year it is planted?

4. How old do filberts have to be before they bloom?

MISSOURI.

ANSWERS.—1. Bees will work in almost any kind of a hive; but it is not wise to make one of an odd size.

2. Generally, frames are 1⅜ inches apart from center to center, but some prefer 1½. There is no better lumber for them than pine.

3. It does not bloom till the second summer, then dies the next winter, root and branch.

4, I don't know anything about filbert trees; if it is a honey-plant perhaps some one can tell us about its blooming.

Building a Bee-House in Texas.

I am an amateur bee-keeper, and would like to put my out-apiaries in houses for protection against theives. We do not need any protection against the cold here, and such a house, single-walled, for protection against thieves, can be built at a cost of about $1.00 per colony.

Bees begin to get some honey here in April, but we get no surplus until July, all from cotton. May is warm and the bees barely make a living. June is about the hottest month we have, and the bees get a good living and sometimes a little surplus. I know of no one that has kept bees in a house in this State, so I ask for information.

1. Would the bees store as much honey in such a house as in the open?

2. Would they swarm less?

3. Would so much shade keep them from building up sufficiently strong for the honey-flow in July? (Note the weather conditions here.)

4. What are the disadvantages of such a house?

ANSWERS.—1. I think they would.

2. I don't know. That would depend a good deal on the ventilation. If close, so the bees would be warmer than in the open, they might swarm more. If thoroughly ventilated, so the bees would be cooler than in the open, they might swarm less.

3. No, I don't believe the shade would prevent their building up.

4. I don't know anything about it from personal experience, but aside from the matter of expense I think you might find the greatest objection would be that it would be a hot place for you to work in.

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What Yon Yonson Thinks

For long time ago it vas a man som vas name Adam. He vas a good man, an he never had dun anyting rong, but he vas decieved by da evil sperit, an he ete of da frute vat he vas told not to ete. He make plenty big mistake, an becaus of das mistake ve iss bornd sinners, an da vorld is full of sin an misery, and ve half to vork four ours daily bread.

But in von vay Adam vos lak odder peoples. Ven da Lord ask him vy for he ete of da frute vot he vas commanded not to ete, he say it vas da voman's folt. Now, if you vil read da bible careful you vil fine dat' Adam vas given das commandment before Eve vas created, and it vos Adam's an not Eve's fault. An' da Lord cursed the ground for Adam's sake, an so it iss even now, it iss easy to mak mistak, but it iss plenty hard yob to fix it up lak it vos before. An' if ve don't votch out, a little mistake grow plenty fast, an' by and by ve goan to hav big harvest, an' vot ve sow ve goan to reap.

Ven bad peoples mak mistak it iss bad, but ven good peoples mak mistake it iss lots vorser, cause deir influnce go so much furder an' du more harm.

Now, somebody mak plenty awful big mistake about da lection of da yeneral manager, an' dom is all good mans, so it dun lots of harm. Now, everyboddy vat mak dat mistak let dom not rest till dom mak it rite. Now, ven ay got card to vote for yeneral manager, ay got paper vot dom call report, an it say dom never got da mony from Abbott vot he collect; but Abbot he pay das mony for long time ago, an got receet vot he carried till it soon be vord out. An' on nodder von paper it say, ven dom try to explain 'bout von dom call "da late unpleasantness"—dat is very nice name for plenty bad ting—but it say da directors don't can lect yeneral manager ven it don't vas any vacancy. But, my goodness, dom knowed dom dun it. Vy for dom goan to du someting dom can't do? An' den becaus dom can't do it, dom blame Abbott for da hol ting. Dat iss lak little boy vot bought gum, an after he svalered it he von't to trade bak. Ay don't can understan' vy for dom go to so much trubble to bete Abbott.

If Mr. Abbott dun sumting awful rong let him stan up an everyboddy vat never dun any ting rong let him trow big stone at Abbott. Ay tank it don't goan to tak very big pile ma stones to supply da demand before dom vas all good friends, an dom sed nice tings bout each odder. But ven good friends vork togedder to du good den Satan he sneeak up behine an' to mak dom to disagree, an if he can yust make dom to quvarl den ay tank he make big laf, an rejoice. But ven Satan rejoice den da angels veep.

Mr. A. I. Gleanings, he bean rite sermans for long time, an he du lots of good, an if you tak notes all dom big bee-mans iss good mans, an' dom iss nearly all Christians an temprence mans. Dom don't even chaw tobacker, cause dom follow Mr. A. I. Gleanings teachings, an dom don't smoke corncob pipe, cause Gleanings he giv da Clark's cold-blast smoker so dom can keep cool. Derr is no odder bisness vat got so many Christian leaders som bee-keeping, an' if dom vil youst yoin hands and fite Satan den Satan vil hav to run lak sixty. An' ve don't goan to hav any more trouble; an ve can turn ours attention to honey-plants an shookted svarms, an pupaskinnæ castofficæ (little cord vot dom ty der quveens up ven dom git too hi lifed and vant to svarm).

Now, ay tank all dom little bee-mans lak Yon Yonson vot belong to N. B. K. A. should vote vot dom tank is best, but all dom directors vot vote for an' lect Abbott before, dom aught to vote for Abbott das time, cause dom is honest an' acknowledge it vas all deir fault, an' dom shud undo da rong dom allreddy dun to Abbott. In place of trying to pull a good brudder down, du lak da good Samaritan, cause ve should prefer ours neighbor before ourselv.

Now, if it bean anybody vot don't lak Yon Yonson cause he express hiss opinion about

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Alfalfa Clover	.80	1.40	3.25	6.00

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1004 E. Washington St., INDIANAPOLIS, IND.
49A26t Please mention the Bee Journal.

"Bees in Colorado"

I still have several hundred copies of the souvenir with the above title. The bee-papers and a good many people without visible axes to grind have said it is a valuable and attractive thing. If you should like to have a copy, send me a silver dime or 5 two-cent stamps, and I will mail you a copy.

"BEES IN COLORADO" is the title of a 48-page and cover pamphlet gotten up to boom the Denver convention. Its author is D. W. Working, the alert secretary of the Colorado State Bee-Keepers' Association. It is beautifully illustrated, and printed on enameled paper. It is a credit to Mr. Working, and will be a great help in acquainting those outside of Colorado with the bee and honey characteristics and opportunites of that State.—American Bee Journal.

D. W. WORKING, Box 432, Denver, Colo.

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6A26t

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vat dom call "da late unpleasantness," den let him stan' up an ay vill forgive him, for ay lak all dom bee-mans an vont dom to be good.

Now, ay is dun on das subject. Ay tank you can't gess, an ay don't goan to tell you, who ay goan to vote for eider, you bet.

YON YONSON.

FROM MANY FIELDS

Good Season in 1902.

We had a very good season in 1902, considering our locality, northern Kentucky. I started in the spring with 60 colonies of bees, increased to 85, and took 2500 pounds of nice white honey in one-pound sections. We got no honey last fall. My bees are in good condition at this date.

There seems to be good prospect for a honey crop this year. The ground is full of white clover.

I admire the old American Bee Journal as much as ever. P. McDOWELL.

Mason Co., Ky., Jan. 24.

Fine Weather for Bees.

We are having fine weather here for bees. Nine degrees below zero is the coldest we have had so far. The bees have had a good flight every 20 days, and a good clean-out.

I have my bees under a good shed, out of all the storms.

I have not had the best health this winter.

G. W. VANGUNDY.

Uinta Co., Utah, Jan. 24.

Fastening Foundation In Sections.

We used the Daisy Foundation Fastener, but I did not like the way it worked, so I made a little change, and thought it might help others to tell how I fixed it. The way it was, it got too hot for the wax and would melt it down if one did not hurry. I nailed a tin on the block that holds the sections, and let it just miss the iron plate (under the plate); the tin cuts off all the heat from the lamp so the plate will not get so hot, and the heat from the lamp cannot get to the starters.

I think I have made it plain.

JOHN ERDMAN.

Berrien Co., Mich., Jan 23.

Bees Demoralized—Bee-Honey.

My bees were demoralized last year, as were those of the rest of the fraternity, but I fed them, and humored them as well as I could. I built them a nice cellar and on top of that a nice bee-house, so they will be in shelter and shade, as it may be desirable.

My place on University Heights is high and exposed to public gaze. Now the house is a puzzle to the passers-by, that is, if they don't come too near. REV. H. A. WINTER.

Dane Co., Wis., Jan. 27.

Wintering Bees—Season of 1903.

My bees did fairly well the past season—I sold 35 pounds of fancy-white comb honey at 15 cents per pound, from 2 colonies, and I took out several pounds for home use. I am wintering 4 colonies, which seem to be in pretty fair condition. I winter my bees under ground, just leaving an air-hole. I pile ground first, then put sod over the top, which I lay like shingles, and on the very top I put an extra-big sod, and it keeps the snow or rain-water out, and keeps the bees dry and warm.

1902 was a pretty fair season for bees in this locality, only it was a little too cold up to June, but the latter part was warm enough for bees or human beings. There were plenty of rains all summer, floods tearing bridges, and the railroads and cornfields were all

To make cows pay, use Sharples Cream Separators
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washed out. The corn crop in this part of the country did not amount to very much, as the corn all froze.

We are having a very comfortable winter so far; it has not been 20 below zero yet, and not more than six inches of snow. Last week the snow was nearly all gone, but yesterday it snowed some and to-day a little more, which will almost make sleighing.

I do not see how any bee-keeper manages to get along without the American Bee Journal.

Clayton Co., Iowa. B. F. Schmidt.

Has Kept Bees Long.

I put my bees in for the winter packed well with chaff and ground cork. I have 52 colonies. They stored only 200 pounds of surplus last season, it being too wet or cold.

I had to feed several colonies in the fall; I had 58 colonies then, but when I commenced to pack for winter I found 6 colonies had starved out.

I have kept bees for 38 years, and sometimes have more than at other times. I use all movable-frame hives. I used to use the D. P. Kidder hives, but have now discarded them and am using the Falconer chaff hive, also some Simplicity and Chautauqua, and the dovetail. They are all very satisfactory to me. The fence separators I do not like, nor do I like the plain sections; I would rather have the 4¼ by 4¼ with wood separators or even tin. I have used both kinds. The trouble with the fence separators is, the bees build comb to them so that when I take out the sections a good many of the cappings are broken, and it makes them leak.

Elisha Bailey.

Erie Co., N. Y., Jan. 27.

Swarming-Out in Winter.

My bees are wintering finely. They had a flight 2 weeks ago, which did them lots of good. I had one swarm out then just like in summer. I did not know what to make of it at the time; they went in with their next door neighbor, which was a weak one, but had plenty of stores, but when I examined their hive I found the queen dead, and about 30 pounds of honey, so I concluded they could not exist long without a queen.

P. H. Harbeck.

LaSalle Co., Ill., Jan. 24.

A Fair Crop Last Year.

I had a fair crop of honey last year, but would have gotten more if it had not been so wet. I got 1300 pounds from 21 colonies, spring count, and increased to 41.

Mortimer Davis.

Livingston Co., N. Y., Jan. 19.

Italian Bees—Smoke for Foul Brood.

I have read so much about the long-tongue queens that it makes me laugh. The Italians are the best workers in every respect. The advantages of the Italian bees are:

1. They are more industrious.
2. The queens are more prolific.
3. They can obtain honey from flowers where blacks cannot.
4. They will not hang on the outside of the hives for weeks and months before they swarm, like the blacks do.
5. They seldom sting, unless they are roughly handled or abused, then they will defend themselves vigorously.
6. They are a hardier bee, and can stand more cold than the blacks. I have kept bees for the last 45 years, and tried all kind of bees, but the Italian takes the lead.
7. The Italian bees swarm earlier.

I have read so much about clipping queeens' wings, and I tried it several times, but I soon let it alone. It is what I call a nuisance. It may do for an old quack doctor who has nothing else to do, but it would not agree with most bee-keepers. A clipped queen when it leaves its hive is sure to fall to the ground, and the ants, spiders or toads will soon take care of her. I would rather lose a colony than clip all the queens. I have handled bees from childhood, and I can handle them like flies. I can take a whole colony of bees, and

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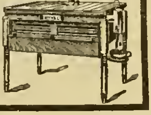

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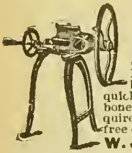

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2000 lbs. Basswood Extracted honey, at 9c a pound. All in 60-lb. cans. Warranted PURE HONEY. **JOHN WAGNER, BUENA VISTA, ILL.**
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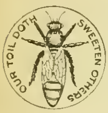
Please mention Bee Journal when writing.

A Celluloid Queen-Button is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-lapel. It often serves to introduce the subject of honey, and frequently leads to a sale.

NOTE.—One reader writes: "I have every reason to believe that it would be a very good idea for every bee keeper to wear one [of the buttons] as it will cause people to ask questions about the busy bee, and many a conversation thus started would wind up with the sale of more or less honey; at any rate it would give the bee-keeper a superior opportunity to enlighten many a person in regard to honey and bees.


OUR TOIL DOTH SWEETEN OTHERS

The picture shown herewith is a reproduction of a motto queen-button that we are furnishing to bee-keepers. It has a pin on the underside to fasten it.

Price, by mail, 6 cents; two for 10 cents; or 6 for 25 cents. Send all orders to the office of the American Bee Journal.

BOYS WE WANT WORKERS
Boys, Girls, old and young alike, make money working for us. We furnish capital to start you in business. Send us 10c stamps or silver for full instructions and a line of samples to work with. **DRAPER PUBLISHING CO., Chicago, Ill.**

The Deming Catalog.—The 1903 catalog of the Deming Company of Salem, Ohio, is just off the press. As usual, our readers will look to it to exemplify in practical form the latest ideas in spraying orchards, vines, potatoes, shrubbery, etc. The Deming people have been so long engaged in the business of making Sprayers, and their whole line has been brought up to such high efficiency in the estimation of spraying people, that it has become second-nature to look to their catalog to show what is best adapted to any particular purpose. It includes Hand, Bucket, Knapsack, Barrel, Mounted and Power Sprayers. In certain sprayers of their line, notably the Century, Simplex, Peerless and Success Knapsack Sprayers, the mechanical agitation of the liquid, insuring perfect mixing of poison with the water, is worked out to a nicety. The wide adaptabilty and general usefulness of the line cannot be realized without perusing the catalog. As usual, it will be mailed to any one writing for it. Kindly mention the American Bee Journal when writing them.

empty them over my naked body without receiving a sting. I stated the same thing some 24 years ago when Mr. Newman was editor of the American Bee Journal.

For foul brood I use hickory-wood smoke three times a week. Fill the hives plump full, until it pours out of the entrance. Keep it up from spring until fall.

GUSTAV LEUPOLD.

Will Co., Ill., Jan. 9.

About Half a Crop.

In 1902, from 18 colonies, spring count, I got 362 pounds of comb honey, and 346 pounds of extracted—about half a crop for this section of country.

The floral matter was unusually prolific, more particularly the basswood; and just at the beginning of the flow of the latter those tremendous rains utterly destroyed the nectar on which the honey crop principally depended. We did not have that continued cold weather in June like many complained of.

I winter my bees on the summer stands, with winter-cases slipped over the hives, snugly packed with leaves.

The outlook for white-clover the coming season is great. M. N. SIMON.

Wood Co., Ohio, Jan. 26.

No Nectar in White Clover.

I have seen a great deal of complaint about white clover not having nectar in it the past season. I have been in the bee-business since 1880, and have made a close study of honey-plants. Clover will not yield much the year it comes from seed. The young clover comes up in the spring, and in June and July it is growing runners, the same as strawberry plants; these runners take root like the berry-runners do, until the ground is all matted over the second year when the plants have their growth and the whole energy of the plant goes to bloom, honey and seed. The blossoms come all along on the runners that grew the year before.

In 1901 the drouth in this country killed all the clover, and blue-grass, too. The clover came up in full glory when it commenced to rain last spring. Next season promises to be a great one for honey in this part of the country. The prospects are the best I have seen for 15 years. Get ready for it, and see if your non-swarming plans fail.

FRANK VOORHEES.

Henderson Co., Ill., Jan. 21.

The Climate of Washington.

In the "Question and Answer" department (page 779, 1902). I notice a statement which is somewhat misleading, as to the climatic conditions of our State. The statement reads thus: "It rains almost constantly from the first of November to the first of March." It is signed "Washington." Now, as for the western part of the State, this statement is no doubt about correct, but it does not apply to eastern Washington, as we don't have more than about 2 days in which it rains or snows in a week, on an average, from Nov. 1 to March 1, or any season of the year. We don't have any more rain here than is needed for the good of the country.

It might be of interest to some readers to know upon what days bees were able to fly last winter, in this country; I will give the dates and temperature, as this will give an idea of the weather that we have here. The dates, as per diary kept by me in connection with bee-keeping, are as follows:

Nov. 13, packed bees for winter; temperature 48 degrees; Nov. 14, 50; Nov. 24, 45; Jan. 4, 46; Jan. 7, 53; Feb. 15, 50; Feb. 21, 48.

After this date they usually take frequent flights. I winter my bees in a long, low shed, all boxed up except a space in front of the entrance so they can fly when the weather is suitable. The hives set on their stands, and are about 4 inches apart. I use a Hill's device on top of the frames, and a gunny-sack quilt on this; then put on an empty super, then take a large gunny-sack quilt and spread over the super, and press the quilt down to the other quilt, and then fill its super with chaff, fold the quilt over it, put on the cover,

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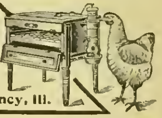

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pack straw all around and between the hives and they are ready for winter. I use the 8-frame Langstroth hive. I have an 8-inch circular cross-cut saw, with mandrel, and complete outfit of this kind, also a set of carpenter tools, so I make all my hives, supers, frames, hive-stands, bottom-boards, covers, and everything in that line except sections and separators.

I have the "A B C of Bee-Culture," as text-book, and the American Bee Journal as my helper, so I am very well equipped for the bee-business.

By the way, I want to say that the coldest weather we have had this fall and winter, is 14 degrees above zero one morning, and 16 degrees for 3 or 4 different mornings. It is now Christmas day, ranging from 36 degrees in the morning, to 42 degrees at noon.

Whitman Co., Wash. L. V. RICKETTS.

Management for Best Results.

Partly to disagree with the statement on page 823 (1902), and partly to give my own views on wintering bees and suitable hives, I wish to say a few words that may benefit some beginners in my circumstances. Of course, I am running mostly for extracted honey.

I have all 8-frame hives, and will tell how I work them to get an extra-good yield of honey when others in this locality complain of short crops.

I use 2 hive-bodies, one on top of the other, and 16 frames of brood-comb. Of course, the second hive should not be put on until the lower hive is full of brood, which is generally about June 1. After the second hive is on, put a honey-board over it, and if the weather is all right put a third story on with extracting-combs. In my case the bees go up into the third story with most of their surplus, and the combs are always nice, white and clean. Of course, I have plenty of hives which would not be advisable for those with a large number of colonies; but this is intended more for people with 25 or 50 colonies of bees.

Now, 10-frame hives would not be so good in my case, because they are too heavy and bulky to handle, and 20 frames are too many for the queen to occupy, while 10 are not enough; 16 seem about right. The bees may fill the two outside combs with honey—so much the better for winter stores.

In regard to the article on page 823, 6 brood-combs would not be enough for most of my queens, and I don't see how you can have a strong colony of bees with so few combs, unless you build up with more combs, and then take away when they are strong; that will generally force the bees up into the surplus apartments. But in regard to putting 6 or 8 frames of honey over a hive of bees for wintering, that will not always work, for the bees may starve and not find the honey in cellar-wintering. I have four similar cases this winter, where I had to take out the outside frames and spread the others and put honey from the top story down with the bees. It's all right, generally, if the bees have been occuppying the combs all summer, but to put honey in a top story just before putting bees into the cellar doesn't always work, unless they are crowded for room. P. H. DAVIS.

Hennepin Co., Minn.

CONVENTION NOTICE.

New York.—The annual meeting of the Oswego County Bee-Keepers' Association will be held at Fulton, N. Y., Saturday, March 7, 1903. Prof. Frank Benton will be present and address the meeting. An interesting program is being prepared, and all persons interested in bees are cordially invited to be present.

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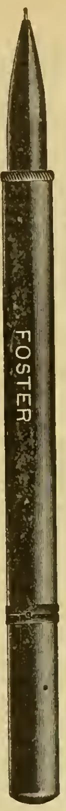

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Pencilaria—A New Feed.—A. A. Besener, of Cook Co., Ill., says: "The new fodder-plant, Pencilaria, made a phenomenal growth as compared with corn and other plants of that species, some of the plants reaching a height of ten feet in spite of the floods covering my ground a foot deep during the summer."

This new fodder-plant seems to be attracting universal attention among our readers, and the crop is truly wonderful, as it yields from three to seven cuttings per year from one sowing and has produced 95 tons of green fodder per acre from three cuttings in a carefully weighed test.

The seeds are so very small that one pound will plant an acre and still one plant usually has 25 to 75 stalks growing 7 to 14 feet in height. When it is figured that one-fourth acre will produce sufficient fodder to support a cow six months either for summer or winter food, and that the dry hay as well as the fresh fodder is highly nourishing, the value of the new plant will be better appreciated.

Knowing that many of our readers will want to try it, we have arranged with the introducers, the Iowa Seed Co., of DesMoines, Iowa, to send a small sample (sufficient to plant a row 100 feet long) free to any one who wishes it. Be sure to mention the American Bee Journal when writing them.

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HONEY AND BEESWAX
MARKET QUOTATIONS.

CHICAGO, Jan. 9.—The demand is not more than usual; hence stocks are sufficient, especially as Cuba has now comb honey on this market. This is a new source of supply, and is a factor that must be reckoned with, as it obviates the necessity of laying in a stock during the summer and autumn to draw from in the winter and spring months. The best grades of white comb sell at 15@16c per pound, with travel-stained and light amber, 13@14c; darker grades, 10@12. Extracted, 7@8c for white, and 6@7c for ambers. Beeswax steady at 30c.
R. A. BURNETT & Co.

ALBANY, N. Y., Jan. 7.—Honey demand and receipts light. We quote white comb, 15 cents; mixed, 14c; buckwheat, 13@14c. Extracted, white, 7@7½c; dark and buckwheat, 7@7½c. More demand for buckwheat than any other here. H. R. WRIGHT.

KANSAS CITY, Jan. 31.—The demand for honey has been very light; receipts fair. We quote as follows: Extra fancy, per case, 24 sections, $3 40; strictly No. 1, $3 30; No. 1 amber, $3 00@$3.25. Extracted, white, per pound, 7c; amber, 6@6½c. Beeswax, 30c. C. C. CLEMONS & Co.

CINCINNATI, Jan. 7—The demand for all kinds of honey has fallen off considerably in the last few weeks, owing to the many other sweets offered at this season of the year. Lower prices are no inducement to increase the consumption, as the demand is not there, and will not be until about the end of the month; consequently it is folly to offer at lower prices. We quote amber extracted in barrels at 5¾@6½c; white clover and basswood, 8@9½c. Fancy white comb honey, 16@17c; lower grades hard to sell at any price. Beeswax firm at 29@30c.
THE FRED W. MUTH Co.

NEW YORK, Jan. 23.—Demand for comb honey quiet on all grades, and prices show a downward tendency. Supply quite sufficient to meet demand, if not more so. We quote fancy white at 15c; No. 1, at 14c; No. 2, at from 12@13c; dark and buckwheat, at from 11@12c.

Extracted also quiet with abundant supplies with the exception of white clover. We quote white at 7c; amber at 6½c, and dark at 6c. Common in barrels from 60@65c per gallon.

Beeswax firm at from 29@30c.
HILDRETH & SEGELKEN.

CINCINNATI, Jan. 20.—The demand for comb honey has fallen off, which in general happens right after the holidays, although prices rule as before: White clover, 15½c; extra fancy water-white, 16c; no demand for lower grades. Extracted honey is in fair demand, and sells as follows: Amber, in barrels, 5¼@5½c; in cans, 6c; alfalfa, 7½c; white clover, 7½@8½c. Beeswax, 28@30c. C. H. W. WEBER.

SAN FRANCISCO, Jan. 14.—White comb honey, 11½@12½c; light amber, 10@11c; dark, 5@6½c. Extracted, white, 6@6½c; light amber, 5@5¼c; amber, 4@4½c. Beeswax, good to choice, light, 26@27½c; strictly fancy light, 29@30c.

The country merchant, representative of trade interests, estimates "entire stock of honey of 1902 in the State at 15 cars," worth 5¾@6c per pound at primary points, subject to a $1.10 freight-rate to the East.

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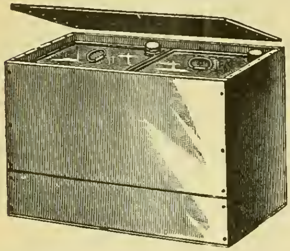

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43d Year. CHICAGO, ILL., FEB. 19, 1903. No. 8.

WEEKLY

APIARY OF N. STAININGER, OF CEDAR CO., IOWA.
(See page 116.)

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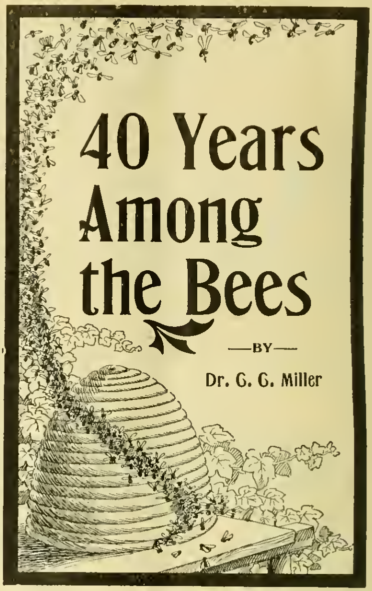

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BEE JOURNAL

43d YEAR. CHICAGO, ILL., FEB. 19, 1903. No. 8.

✻ Editorial. ✻

Shaken Swarms.—Much has been written and said about shaken swarms, but it may not be amiss to give somewhat succinctly the manner of proceeding in general, so that any new-comer may have the desired information, and that any others may have it for ready reference.

Shake off part or all of the bees from the combs, leaving on the old stand the old queen with the bees and frames filled with full sheets or starters of foundation. That's the thing in a nutshell, and it is very simple, there being left on the old stand much the same as a natural swarm.

Yet, as to the minutiæ of proceeding, especially as to the disposal of the frames of brood, there is much diversity of opinion and practice. What is best for one place, or for one set of conditions, may not be best for another, and there is left room for each one to use his own judgment.

Some wait until the presence of queen-cells show preparation for swarming before operating. Some operate as soon as the colonies are sufficiently strong, or the season sufficiently advanced, without waiting for queen-cells. As already intimated, some shake off only part of the bees, others shake and brush off all. As to what is left in the hive with the shaken swarm on the old stand, the same variation prevails as with natural swarms. Some hive the swarm on starters, some on frames filled with foundation. Some give to the swarm a frame of brood in order to prevent absconding, but this frame of brood is by many removed and replaced with foundation after two or three days.

So much for the swarm itself; now as to the disposal of the brood. Half the bees, or such a matter, may be shaken into the swarm, and the brood with the remaining bees put on a new stand, there to rear a queen, or else to have a queen or queen-cell given them. In any case all the field-bees may be expected to return to the old stand.

All the bees may be brushed from the combs, and the combs distributed where they will do the most good—perhaps for helping to build up weak colonies. A favorite way in some parts of Europe is to put the combs of beeless brood in a second story over another strong colony, and it is said that a colony thus strengthened will not be expected to swarm. But this is when working for extracted rather than for comb honey.

It will be well for beginners to become somewhat familiar with this matter, and take those peculiar plans which may seem best adapted to their circumstances, modifying them afterward as experience may dictate. Questions concerning the matter will no doubt be cheerfully answered in the proper department, but when making out your questions, first study carefully whether some of them are not fully answered in what is said here.

◆

Gasoline as a Motor for extractors—Editor Root has "in his head" a gasoline-engine by which a honey-extractor may be operated with the expenditure of not more than a quart of gasoline per day.

◆

Fertilization in Confinement.—Copying after the Davitte plan, R. F. Holtermann reports in Gleanings in Bee-Culture an experiment with a tent 25 feet high and 30 feet in diameter. The tent was close beside a large apiary, and on the side of the tent next the apiary were placed nuclei containing virgin queens, and at the opposite side colonies containing the drones. In each case free entrance at the will of the bee-keeper was allowed for the drones and queens into the tent, the regular outside entrance for the workers being supplied with perforated zinc. The drones flew freely, and seemingly at home, in the tent, but the queens spent their time trying to get out through the perforated zinc, and were fertilized only when the zinc was removed, so as to allow their flight into the open air. If the drones could be persuaded to "make themselves at home" in the tent, it seems that it ought not to be impossible to persuade the young queens to do the same.

◆

Moving Bees.—It is generally understood that while bees moved only a short distance return in large numbers to the old stand, those moved a long distance mark anew the location and stay where they are put. Geo. W. Williams thinks this is a mistake, and says in the Progressive Bee Keeper:

> While the bees are shut up in the hive, as they must be to move them, how do they know whether they are being moved five miles or five rods? They do not know, nor have no way of ascertaining until they get out of their hive and look around, and the old bee that has been moved five miles comes out of the hive, if there is no obstruction in the way, and flies direct, as she thinks, for the old field, but finds, when too late, that she is in a new territory, and lost, lost "for keeps," while those moved only a short distance return and hover around their old stand, and we can see them and note the number lost; while those moved a long distance do not know where to go, scatter about and perish, and we have no way of knowing how many are lost only by the depletion in the hive.
>
> There are just as many bees lost out of a colony moved five miles or five rods, if everything else is equal. The point in favor of the long-distance move is brought about from the fact that in a long-distance move we shake and disturb the bees more than in a short move, and the more they are disturbed the more they will fly around the entrance at the first coming out to see what the trouble is.

While this may be worth thinking about, the probability is that those who have moved bees to a distance will say that they have never noticed any depletion in numbers, and if it be true that "there are just as many bees lost out of a colony moved five miles or five rods," there ought to be no difficulty in recognizing a great diminution in numbers.

◆

Swarms With Clipped Queens.—Do swarming bees usually cluster on the ground with a clipped queen? Delos Wood and Dr. Miller say in Gleanings in Bee-Culture that when a swarm issues with a clipped queen they rarely find the queen on the ground with a cluster of bees about her; that when she comes out she will be climbing about in the grass looking out for herself, and in the great majority of cases will return to the hive without any cluster being formed about her. Editor Root favors what is perhaps the commonly accepted view, replying to Mr. Wood:

> You and Dr. Miller may be right; but certain it is that many clipped queens I have found near the entrance of the hives, from colonies that had just cast a swarm, and had a cluster of bees around them. It may be that I happened on to the "exceptions that prove the rule."

◆

Queenless Bees Carrying Pollen.—It is probably accepted as a rule quite generally that a queenless colony carries in little or no pollen, and it is also agreed that an unusual amount of pollen will be found stored in such a colony. These two things do not go together. Close observation will probably show that a queenless colony carries in as much pollen as a colony having a queen if the observation be made during the first part of its queenlessness. But the pollen not being needed to feed young bees, there is an accumulation, and either because the bees realize that it is not needed, or for some other reason. they carry in very little pollen. So the rule is of no value when applied to a colony that has been queenless only a short time; but when a colony is found carrying in little or no pollen when others are carrying in much, it may be suspected that such a colony has been without a queen for some time.

◆

Bulk Comb Honey.—Mr. H. H. Hyde serves notice in the Bee-Keepers' Review that Texas will produce bulk comb honey in spite of any effort of a National organization to the contrary. He says, "I fancy that the first thing the combine would undertake to do would be to make a demand that the Southwestern producers quit putting up bulk comb, and go back to section and extracted honey;" although he does not say upon what he bases this fancy. He certainly gives a good argument against any such attempt, in the statement that Texas alone produces 200 to 300 cars each year, with a demand beyond the supply.

It would hardly come within the province of a National organization to "quash the demand for bulk comb," and oblige the production of extracted or section honey in place of bulk comb, any more than it would come within its province to say that section or extracted honey alone should be produced. Perhaps, however, it may not be necessary to object seriously to anything of the kind until there is some intimation from the promoters of the scheme that any such improper discrimination is intended.

Weekly Budget.

The Heddon Patent Expired.—James Heddon announces in the American Bee-Keeper that the patent on his hive "expired last September, and so all are free to make and use it."

◆

The Wisconsin Convention was held the first week of this month at Madison. The officers elected for the ensuing year are these:

President, N. E. France; Vice-President, J. Hoffman; Secretary, Gus Dittmer; Treasurer, H. Lathrop. Recommended as next State inspector of apiaries, N. E. France; as State Fair judge of apiarian exhibit, F. Wilcox; committee on legislation, N. E. France; committee on St. Louis Fair, the executive officers of the Association including F. Wilcox.

The legislative committee has a bill in the State Legislature to amend the law of 1898, allowing $700 instead of $500 for the suppression of foul brood. The bill has had a hearing before committees, and so far favorable. We trust it may pass, as it is only just and fair to the bee-keepers of that State.

◆

The Apiary of N. Staininger, of Cedar Co., Iowa, appears on the first page. The following refers both to the apiary and to its owner:

Mr. N. Staininger, although not yet an old man, has had many years of experience as a bee-keeper, having worked with bees ever since he was 10 years old. In those pioneer days, if the bees all died during the winter he would go out into the woods and find a colony of wild bees, which he would capture in order to get a start for the next year.

Even by the use of the crude materials then at hand to aid one in caring for bees, Mr. S. was very successful in this line of work. He is energetic and progressive, and a visit to his apiary will convince one that he was not willing to rest on his first laurels of success, but has kept up with the times, and has been quick to see the value, and to adopt many of the new methods and contrivances for bee-culture.

Mr. Staininger does not run to large numbers of colonies, keeping them down to 225 to 250.

He is also engaged in another line of business; and it is surprising that with all he has to do, he is able to keep everything in such perfect order, and not allow the number of colonies to increase nor decrease more than he wishes. His bees show the finest marks of the Italians. He has introduced queens to a number of apiaries in his neighborhood, and they have always proven a great success.

Mr. Staininger's honey market is almost entirely in his own town, for he is known as a man who always has the best, and who does a square business. He is still in the prime of manhood, and we hope that many more years of successful bee-culture may lie ahead of him.

E. W. Coe.

Sing a Song.

If you'll sing a song as you go along,
In the face of the real or the fancied wrong;
In spite of the doubt, if you'll fight it out,
And show a heart that is brave and stout;
If you'll laugh at the jeers and refuse the tears
You'll force the ever-reluctant cheers
That the world denies when a coward cries,
To give to the man who bravely tries;
And you'll win success with a little song—
If you'll sing the song as you go along!

If you'll sing a song as you plod along,
You'll find that the busy, rushing throng
Will catch the strain of the glad refrain;
That the sun will follow the blinding rain;
That the clouds will fly from the blackened sky;
That the stars will come out by and by;
And you'll make new friends, till hope descends
From where the placid rainbow bends;
And all because of a little song—
If you'll sing the song as you plod along!

—Selected.

BEEDOM BOILED DOWN

Amount of Honey Annually Produced in the United States and Cuba.

At the Philadelphia convention of the National Bee-Keepers' Association a few years ago, I gave a set of figures going to show the approximate amount of honey annually produced in the United States. This estimate was based on the number of section-boxes made and sold by all the manufacturers in the United States, for during that year we learned the entire output. The amount of goods sold in various parts of the country would also give something of an idea of the amount of extracted honey produced. Well, this estimate, without going into details as to how the results were arrived at, show that there was 50,000,000 pounds of comb honey and 100,000,000 pounds of extracted, or a total of 150,000,000 pounds, all told. The actual valuation of this, conservatively figured, would be about $10,000,000.

In answer to a correspondent, I repeated these figures, and the editor of the Pacific Bee Journal compared them with the United States census report of the annual honey crop. He has prepared a new set of figures by putting them in such a shape that they will be more easily understood. According to his way of figuring, my estimate of 150,000,000 pounds of honey would make 7000 carloads. The United States census report on the same basis would make 6667 carloads, or only 333 less than my estimate. These figures are significant when we come to consider the fact that they were arrived at through totally different and independent sources—significant because they are so close together. But my estimate, as made three years ago, was figured on a very conservative basis; and the United States census report of 1899 probably did not take account of *all* the honey produced. In fact. as our readers know, I have questioned the accuracy of the report. But either way we figure it, both estimates are under the actual output of honey in the United States at the present time.

I think we should be safe in concluding that we may estimate that the actual product of this country is not far from 10,000 carloads. This seems like an enormous amount of honey; but if one will go through some of the large supply-manufactories of this country, and look over their order-books, he will have no occasion to doubt these figures.—Editorial in Gleanings in Bee-Culture.

Brood Clear to the Top-Bars.

E. F. Atwater holds the view that if there is a slight stretching of the foundation in the upper part of the frame, there is less likelihood that it will be occupied with brood. He says in the American Bee-Keeper:

> Editor Root and Dr. Miller have been having a lively "set-to" about brood coming to the top-bars of the Langstroth frame. Dr. Miller's frames are filled with combs built from full sheets of foundation staid with splints; no sagging there; so brood is much more likely to extend to the top-bars. Root's combs are built from foundation staid with horizontal wires, consequently sagging all along the top-bars, and bees dislike to rear brood in cells ever so slightly elongated, consequently an inch or so of honey along the top-bars.
>
> Mr. Yoder, of Idaho, an apiarist of many years experience, suggested this to me, and I am satisfied of its truth, though there are exceptions to this rule.

Stingless Bees.

A. I. Root has found them in Cuba, and has obtained a colony from Ciriaco Guiterrez. He found the bees under the eaves in boxes 8 inches square and 20 long. He says in Gleanings in Bee-Culture:

> The honey and pollen are stored in cells, or, rather, bottles of wax, set upright with the top open. These cells are large enough, some of them, to hold, say, one or two tablespoonfuls of beautiful honey. They are about the shape and size of a pullet's egg, small end up. When filled they are sealed over. The brood-comb is a separate affair; and as the bees are smaller than common ones, the cells are smaller, and the comb is *horizontal*. Mr. G. was kind enough to make us a present of a hive; and while I write (out-of-doors) they are carrying in the honey and pollen at a big rate, close by my head. We have just opened their hive and sampled their honey; but they made no objection of any sort. They keep the entrance to the box contracted by propolis so only one bee can get in or out at a time; and woe betide the insect of any sort that presumes to come near the sentinel that always guards this doorway day and night. Should a robber Italian presume to come near, a dozen dart for her with lightning rapidity and fury. Although they can not sting, they have very powerful jaws to bite Now, then, you would like to keep bees and produce your own honey, but fear the stings, here is your chance. Of course, you will have to come to Cuba, for I do not think they will stand even Florida's cold weather. How much honey can they gather? Mrs. G. said they would give, perhaps, two quarts of honey per colony per season.

Grass for Confining Moved Bees.

In grouping my hives ready for the temporary sheds (the way we winter our bees in western Idaho), all known plans were tried to make the bees adhere to their new location, but results were unsatisfactory until we hit on the plan of stuffing the entrance full of grass. Next morning when the bees find themselves shut in, there is great excitement until they work their way out, and few bees return to the old stand. We believe that this principle is of great value where bees are to be moved a short distance.—E. F. Atwater, in the American Bee-Keeper.

Convention Proceedings.

Chicago-Northwestern Convention.

Report of the Chicago-Northwestern Bee-Keepers' Convention, held in Chicago, Dec. 3 and 4, 1902.

BY OUR OWN SHORTHAND REPORTER.

(Continued from page 102.)

UNFINISHED SECTIONS OF HONEY.

"If one is unable to have all the honey removed from sections until too late in the season, will those sections be fit for use the summer following?"

Dr. Nussle—They will be good next summer, if you have them emptied, of course.

Pres. York—The question is, If one is unable to have all the honey removed from the sections until too late in the season, will those sections be fit for use the summer following? The question implies that the honey is still in the sections.

Mr. Gerbracht—My experience in this has been that the honey is apt to candy over winter, but the natural heat of the bees will reliquefy this; but such sections can be built at the same time.

Mr. Wilcox—I rather expect some of the others here will entertain different views from me on that subject, but it has been my practice to use them if I fail to get them emptied in the fall. In the spring I uncap them, place them in the super and turn them over to the bees, and let them empty out the honey; immediately before the honey harvest commences clean them out, and when I can get them on they will refill them, and they will be all right. I can't see the difference. It may be possible that such honey would be more liable to granulate in the comb, but they go on the market so early that I never know that any of them are granulating. I am inclined to the opinion that they are just as good, but I understand some eminent writers say not.

Pres. York—Yes, Dr. Miller says so, I believe.

Mr. Cady—I use them right along without taking the honey, and I see no difference in the sections; no trouble from granulation or anything of the kind.

Mr. Watts—I agree with that. I have done the same thing. I have had lots of combs that were not filled. All that it is possible to keep over I keep over, and put on my bees in the spring, and I see no difference; they go right on and fill up the combs.

Mr. Whitney—It would seem to me that if one had an extractor it would be better to draw the honey out in the fall and save the sections for refilling, than to allow the honey to remain in over winter.

Mr. Wilcox—Perhaps I misunderstood the question. If they have remained over winter, of course that settles the point.

Mr. Baldridge—In my section of the country if they left honey in the comb over winter it would be granulated solid. Do these gentlemen claim that they put the granulated honey on the hive, and that the natural heat of the bees will reliquefy it?

Mr. Gerbracht—I put on the sections that were granulated solid. I put them on as bait-sections, the best I had. My intention at the time was to have them fill out the same, but when it came to take these off there was no difference whatever between these and those unfinished at the time. There was no difference, all the granulation was gone, and everybody knows that the longer honey is left with the bees the better it gets. It was reliquefied by the bees.

Mr. Wilcox—I thought I made it as plain as I could. I I never put honey back on the hives in the spring that was taken off in the fall, and I don't want to be understood as saying that. I said I uncapped them and placed them outside two or three weeks before the honey harvest to be cleaned by the bees, and at the opening of the harvest place the empty combs in the hives. If you put the fall honey back on the hives in the spring accidentally or any other way, they will fill around it. It would be unsalable. Of course, I would not put honey back in the hives that remained over winter. Have it cleaned in the spring before putting back in the hives.

Mr. Niver—I would like to discuss this subject a little further. What kind of honey was it?

Mr. Gerbracht—This honey was, of course, late in the season granulated honey. As it happened, what we had this year was the same. We had very little white honey this year. It was mixed.

Mr. Niver—I know honey will not do it in our country. It might stay there from July to Eternity without reliquefying. I don't know what kind of honey he has.

Mr. Pickard—Basswood honey won't liquefy.

Mr. Niver—Are you sure that is the same honey in there after the season is over? Isn't it possible that the bees took that honey out and then filled it up with other honey?

Mr. Gerbracht—I don't question that at all. This honey was sealed, and never was unsealed.

Mr. Niver—How?

Mr. Gerbracht—Because they cleaned out all the unsealed, and almost immediately afterward honey begins to come in and they begin to fill it.

Mr. Niver—You feel positive that they don't take it out and seal it up again?

Dr. Nussle—They will carry the granulated honey right out of the sections and fill again, you know, with clear honey.

Mr. Cady—I have had the same experience with the gentleman who has the floor.

Mr. Pettit—Am I mistaken in saying that Mr. Doolittle says that candied honey put into the hive early in the summer will be reliquefied before the close of the season?

Mr. Baldridge—That's the experience I have.

Mr. Pettit—I have no experience. Those sections of honey would be travel-stained; they would be second-grade. I wouldn't like them for myself, but still I think that's what Mr. Doolittle says.

Mr. Baldridge—Those sections are put on to fill up supers the best way possible. I wouldn't advise it as a general practice. I had the sections partly filled, and the best I could do was to set them back. This honey was entirely reliquefied, and there was no way of telling that they had been refinished.

Pres. York—Anything else on this question? If we only had Dr. Miller here now we would have some fun.

Mr. Simon—We put on sections partly filled that had been sealed in the fall—we put them on in the spring. They brought them out sealed, and what was granulated will remain granulated, and what balance is filled out full will form a given part, but it has been our experience that what we put on in the spring will be fresh honey, and the other will be old honey, and I would not put it on the market.

Mr. Baldridge—Supposing that the honey is granulated and you don't want to take any risk. One way is to uncap that honey, dip the sections in water, set them in a box and put that under the hive and let the bees take it all out, and not run any risk. That's the way I do. No trouble to get rid of good, rich granulated honey in the comb.

Pres. York—How does the water affect the wood of the sections?

Mr. Baldridge—Not at all.

Mr. Green—On the question of whether granulated honey will reliquefy, Mr. Doolittle expresses himself very strongly in the papers, saying that it would be reliquefied on the hive, and that was within three months, I think.

Mr. Pickard—Our experience is it will not in Wisconsin. They will clean it out, but it won't reliquefy.

Mr. Moore—For me, there is only one practice: Any section to be emptied with the extractor, put the empty section on the hive, and clean up dry, then in the spring you have it where you want it.

Mr. Pettit—I don't wish to be understood that I would recommend this practice of putting back old honey, because I am sure you would have second and third grade honey where you might easily have fancy honey in those sections. I notice this season that from drawn sections we have sections not so well filled as sections filled with foundation at the beginning of the season.

AFTERNOON SESSION.

The meeting was called to order at 1:30 p.m.

Pres. York—Dr. Miller is here. [Applause.] Mrs. Miller is here, too, but I won't point her out to you.

Dr. Miller—She is right there—the one with the green waist on.

Pres. York—That is the only thing that is green about Mrs. Miller, I can assure you all.

Dr. Miller—*I* am about her sometimes.

Pres. York—Yes, we know *you* are about her sometimes. May be that is one of her trials!

Others who had come in were: Mr. Clyde Cady, of Michigan; Miss Candler and Mr. Jones, of Wisconsin; and Mr. Kluck, the president of the Northern Illinois Bee-Keepers' Association.

The first on the program was Pres. York's annual address:

THE PRESENT NEEDS OF BEE-KEEPERS.

It would be interesting, and perhaps profitable, did time permit, to trace the growth of bee-keeping from its infancy as a pastime and as a business until this present hour. But it is not my purpose just now to read to you a history of bee-keeping, however much I might desire so to do, and however much I am incapable of such a task. But we who are here to-day are mainly interested in things that affect *our* own welfare as bee-keepers, and care not so much as to what affected or interested our predecessors.

LAWS ON BEE-DISEASES.

One of the pressing necessities at this time are laws on foul brood and other contagious diseases among bees. The bee-keepers of every State that has not already such a law on its statute books must work to that end. Illinois, especially, needs to move at once in this direction. There are localities in our State where, if something is not done soon, bee-keeping will be a thing of the past. At the coming session of our State Legislature a bill should be introduced and passed, so that when another spring-time comes we may be ready with an efficient inspector to look after the apiaries that are affected with foul brood or other dread diseases.

This Association, in connection with the State Association, should act in this matter, and see that the necessary steps are taken to secure the passage of such a law. We must protect the lives and health of our bees else there will be no bees to keep, and, like Othello, our occupation will be gone.

ORGANIZATION AMONG BEE-KEEPERS.

There is a tremendous lack of interest among bee-keepers in the line of organization for their own advancement. Nearly every other industry is organized, and reaping the benefits of such get-together plans. Bee-keepers do not seem to realize the advantages that are to be gained from such organization. We need some Moses to lead us out along these newer and better lines, and to show us wherein we are standing in our own light.

Perhaps the first and main reason for organization and pooling our interests is to secure a better marketing of our honey product from year to year. Too many bee-keepers regard their honey crop as just so much extra gain—or like finding money. They do not regard it as they do their other farm crops, hence they rush it off to the grocery store and accept whatever may be offered them in cash or trade. This is exceedingly unfortunate, for too often such foolish procedure, if at the beginning of the honey-selling season, may be the cause of the loss of many dollars to other bee-keepers, as it has a tendency to set the price for the entire season.

Now, if bee-keepers were thoroughly organized such a thing would rarely occur, and thus all would be protected, and all reap a richer reward from their toil and honey product.

Bee-keepers should take a livelier interest in their National Bee-Keepers' Association. Where it now has less than a thousand members it should have several thousand. Were such the case, bee-keepers could secure almost anything they go after. But there is a whole lot of selfishness that must be thrown overboard before the most successful organization can be obtained. There is seemingly too much of the feeling that each individual member will not get in return 200 cents for every 100 he invests in membership dues. We must take a broader view of things. We must learn to have satisfaction in the general advancement of the good of *all* rather than the little success of the individual. Thus, and thus only, can we hope to raise the standard of bee-keeping and bee-keepers.

THE MARKETING OF HONEY.

There is much we need to-day in the line of marketing honey. There is perhaps little to be desired in packages, either for comb or extracted honey in a wholesale way. However, there might be an improvement, or more uniformity in the grading of comb honey. But so long as every bee-keeper thinks his own honey, like the young fellow imagines his girl—the "only onliest"—just so long is there going to be disagreement and trouble in grading. It seems strange that it is so utterly impossible to get two or more bee-keepers to grade their comb honey alike, but such seems to be the fact, nevertheless. Perhaps this convention can help in this matter, as well as in others that I suggest.

A NATIONAL HONEY EXCHANGE.

For years the American Bee Journal has discussed this subject, which is one of such magnitude that no one seems to know where best to take hold in a practical way. And yet, in certain quarters, judging from what has been written recently, some might be led to think it an entirely new thing under the sun. But don't you believe it. A number of our brightest minds has been meditating as well as writing concerning a honey exchange, and some day I have no doubt something tangible and helpful will result. Surely, something of the kind must come. Bee-keepers will have to get together on this subject of marketing their honey, else there will continue the present haphazard way of disposing of the crop which so often demoralizes prices and spoils what would otherwise be good markets.

But before much headway will be made in the direction of a honey exchange, bee-keepers must have more confidence in each other. They must also be willing to pay well for expert management; and they can afford to do this, and will do it, when they see that it will be to their financial interest to do so.

Perhaps in no other business are there more and better brains than in bee-keeping. Then why may we not expect that this great question, like many another, will be solved to the satisfaction of all concerned?

But I must not run on, else there will be no time for more important matters in which you are interested. I merely desired to call attention to a few of the real needs of bee-keepers to day, as I see them, trusting to your ability and wisdom to devise plans as to how all the needs are to be met.

OUR ASSOCIATION.

A closing word as to our Association—the Chicago-Northwestern. There is no good reason why it should not exceed in membership and good works every other association of bee-keepers on the continent, except, perhaps, it be the National. We have the field. We have the bee-keepers in that field. What is needed is that every bee-keeper in the field covered by this Association shall become a member. Don't forget that only $1.00 pays your annual dues, not alone in *this* Association, but also in the National as well. This is a big advantage, and ought to be embraced by every bee-keeper at least within a radius of 300 miles of Chicago.

And now I trust that our present sessions may be both interesting and profitable, and that you may all feel well repaid for having come to this meeting.

George W. York.

(Continued next week.)

Contributed Articles.

No. 2.—The Hive-Problem—Size and Shape.

BY R. C. AIKIN.

In the previous article I said that a hive 12x12 inches, and 20 to 30 inches high, was approximately an ideal size and shape for wintering and breeding. The reason is that the colony cluster can, when there is a good strength or large number of bees, easily keep warm all that is above them, for they can cluster clear across the hive, filling it with bees from wall to wall in all directions, and when so touching all sides all above the cluster is bound to be warm

As indicated before, in summer the colony has filled from the top down with honey. If the flow stopped when half way down, there is yet much breeding-room below, which is usually used to advantage in rearing many bees for winter, so the colony can go in with a cluster sufficiently large to withstand much cold, yet have plenty of stores above them. Again, they may fill the hive to the exclusion of much brood, then go into winter with large stores and few bees, and when a few zero snaps have pinched off the edges of the little cluster there are not enough bees left to make a start in spring, or, at best, a very late start, too late to be ready for a honey-flow. A very short honey-flow may give the other extreme—little honey and a great hive full of bees.

Now observe that these varying conditions must always be to contend with. It is true that an 8-frame hive one year may prove about right because the flow or other conditions were such that about the proper combinations of bees and honey existed. But right in the same yard and season will be other colonies that, owing to having been either weaker or stronger when the flow came, will be found in very different condition, going to both extremes. In some cases the hive has been too big, in others too small, and all in a yard of the same stock of bees and the same season. Then what are we to do?

Well, there is no one thing that will meet all the difficulties, and it is hard at best to avoid the troubles by combining all the remedies at our command. The hive, as improved from the old box or gum as described, that is, one of about 12x12x20 or 30 inches, has had for its object the elimination of some phase of the difficulties, putting under man's control more and more all the factors. It happens, however, that we often sacrifice one thing to obtain another; done sometimes consciously, and sometimes unconsciously. Let me illustrate:

With the old-fashioned box or gum the apiarist could not so easily control the colony to supplant inferior queens, nor take out stores when honey-bound, or put in more when short of stores. Neither could undesirable combs be removed. Often it was difficult to get the colony to store in supers, the brood-chamber being stuffed with honey to the death of the colony the next winter. In order to get combs that could be manipulated, and overcome some of these troubles, the movable frame was invented. Then the deep, narrow hive did not give good results in getting super-work done, so the hive was made shallow to get the surplus stored above, and, as compared with the old way, the results were marvelous, and in the craze to get more and more honey the good of the colony was sacrificed so far as future usefulness was concerned. The introduction of the improved hive was followed with almost unprecedented winter losses, and even to this day it is a fact that the average apiarist does not comprehend the use of hives, and the shallower the hive the greater the losses, and because by the shallow hive once the colony is gotten into condition to do good work, it is worked for all there is in honey and immediate profits, to the detriment or extinction of the colony. Then comes the cry that the hive is a failure, and nine times out of ten the real reason the failure comes is because the manipulator either does not know how, or will not supply the necessary manipulation and management.

All this would imply that a hive must be elastic—be such that it can be accommodated to conditions so as to preserve the equilibrium of conditions, and put the whole thing at the command of the apiarist. I know that there are apiarists that can and do succeed with the 8-frame hive, but it is not proved that that size is the best even with those same apiarists. I am confident that the apiarist who succeeds with the 8-frame can do just as well with a larger hive, and even better. I have used hives as small as 4-frame capacity, and up to 12-frame and larger.

I am, and have been for more than ten years, using a hive 13 inches square, and with frames 6 inches deep. It is in fact a sectional shallow-frame hive, and each section is about equal to five Langstroth frames. In actual practice two sections of this hive are about equal in working results to 8 or 9 Langstroth frames. But the fact that the hive is in sections makes it elastic, and I can use it any size I may wish, and circumstances require.

☞ Suppose there is a fine honey-flow on, and I wish to get all the honey possible into surplus regardless of preserving the colonies of bees, I can do it by contraction. Suppose, again, that I have a quick and full flow that is followed by a slow one, or intermittent, I can contract for the good flow and get the surplus when the conditions are favorable for super-work; then when the slow flow comes, when one can not possibly get good results in comb-honey work, the colony can have the brood-nest enlarged to any size that will allow the storage of all that comes, and at the same time allows of all the breeding the colony wishes to do, and such colonies are the ones that go into winter in prime condition.

Just as I have explained before, the colony run in an 8-frame hive all the year through (I speak of the brood-chamber) will at times have too much honey and too little brood, and vary through every grade to the other extreme. Bees left to their sweet will in big boxes or hives of 15 to 30 frame capacity, will winter more successfully and make larger and better colonies—ones that will send out immense swarms, and put up piles of honey—than can possibly be obtained from the small hives with the same effort.

It is a fact that in most localities where bees are kept, the flow season when the surplus is obtained is of short duration. My present field, but a few years ago, gave almost the whole crop in about three to four weeks in June and July. Then it was important that I have large hives and plenty of stores in the winter and spring before the gathering of surplus, or, if the hive was small, I must resort to feeding and constant watchfulness to keep the colony in the small hive from getting out of stores. I observe from reading the writings of those in localities where there is a supply of nectar previous to the harvest season—a supply ordinarily to keep breeding at its best—that if there be a cold spell or any kind of weather that shuts off the supply, feeding has to be resorted to, else starvation or other damage. I also gather that after the main flow these same localities often have slow flows, or dark honey, conditions that cause the overloading of the brood-combs and consequent reducing of the strength of the colony. I have had such experiences myself, and on no little scale, either; I know that this is a common difficulty, and usually is not provided against by the apiarist.

It is right along these lines that come the benefits of an elastic hive. I venture there is not one location out of ten where much benefit could not be had by such a hive. Of course, the apiarist must manipulate at the proper time, and if he will not do so he would better have a large hive *all* the time. The only use a hive can be is to give advantage in manipulation, and the only time a small hive is actually needed is when there is a honey-flow on that we want in surplus; hence, I desire my colony to have a large hive at all seasons outside of the honey-flow that is my harvest flow, then the colony can spread itself and go right along with little care if for any reason I can not give it the attention.

Returning again to a consideration of the hive I proposed as an illustration in my previous article—a two-story hive of 6 frames each story, a 12-frame hive—such a hive will accommodate almost any colony so far as numbers are concerned, and at the same time will accommodate any queen with breeding-room, and have store-room to hold feed for all the brood she can produce. There would be nothing to prevent such a colony in such a hive from being comfortable and roomy; then when the flow came on they could be shut to one chamber of 6 frames for the short time of the harvest, and, as soon as the main flow was over, doubled again on 12 frames, and would take care of themselves through the fall and fix up a brood-nest better than the master.

Larimer Co., Colo.

(To be continued.)

Rearing Extra-Large, Long-Lived Queens.

BY DR. E. GALLUP.

SOME 20 years ago I was stopping at a friend's house on the mesa, where I found 7 colonies of wild bees in squirrel-holes, badger-holes, and one hanging on a willow tree; by the appearance of the comb it must have been there three or more years. Six of those colonies were in close quarters. The willow-tree colony had only a small quantity of comb, as they could not build outside of the cluster. But one colony was in a large cavity, and had a very large colony, and an extra-large queen. I transferred one hive full of comb, set two extra supers on top, and the bees filled all three, equal to three standard 10-frame hives. All the other six colonies had medium and some quite small queens, and a small quantity of bees. This large colony had, no doubt, been there several years, judging by the appearance of the combs, and had superseded and reared queens to suit the capacity of the hive. The cavity was small at the top, and all the comb was worker-comb, and dug out in the sides of a baranca in black adobe soil. Now, Eastern people will perhaps wish to know the meaning of mesa and baranca. They are Spanish or Mexican words. Mesa means an elevated flat piece of land; baranca means what you would call a gully, washed out by heavy rainfall. I have seen them 50 feet deep, and the wall perfectly perpendicular.

Our California squirrels live in the ground, and are about the size and shape of your grey and black timber squirrels. They destroy tons of growing grain and other stuff. A 20,000-acre ranch paid a man 25 cents per acre for destroying them with poisoned wheat.

A man came for me to take some bees out of his house. My son did the work, and I superintended. They were in a cavity under an upper veranda about 8 feet long and 4 feet wide. They had first built at one side of a division-board placed there as a brace. They had been in there four or five years. They extended their combs back, and finally built on the other side of this board. We took out about 100 pounds of good honey—60 pounds of good, white orange blossom honey gathered last spring. Every cell was built worker size. Here had evidently been one of those large queens and large colonies, but for some unaccountable reason the bees had dwindled to but few in numbers, and no queen or brood of any description. You can readily see that Mr. Alley had nothing to do with rearing those queens, neither had Gallup anything to do with his ignorant and bungling introducing. "How did it happen?" Read carefully Mr. W. J. Stahmann's article on page 776 (1902). He says: "In several generations the egg-laying capacity of queens can be increased, and, on the other hand, if kept in small hives the tendency is to degenerate and lessen the capacity of a prolific strain of queens." Positive fact. That article hits the nail right on the head.

Now, Mr. Alley says he always selects his best cells and very best queens to send to his customers. Now, my friends, if you will use extra-large and prolific queens, and extra-large and strong colonies, as I have described, every cell built at swarming-time, every queen hatched out will be first-class, long-lived, etc. There need be no selection as there is in cells and queens reared in small nuclei. If you wish to deteriorate your stock of bees to the lowest possible degree, rear your queens in the above manner for a series of years. On the other hand, if you wish to rear them up to the highest possible standard of perfection as to prolificness, longevity, etc., use extra-large hives and colonies. In that manner, and in no other way that I know of, can we improve our stock. As Mr. Stahmann says, we can make a wonderful improvement in a series of years. There is no mistake in the fact, for it is a fact, and a positive fact.

This theory will apply to the improvement of stock, vegetables, trees, etc. Who would think of making the improvement that has been made in stock by the deteriorating plan that Mr. Alley recommends—insufficient nourishment, warmth, and all the necessary requirements for success?

Here is an illustration in the vegetable kingdom: On the next block to me two ladies each set out a banana plant last spring. The one spaded up the ground for quite a distance, spaded in a liberal supply of well-rotted manure, has stirred the ground repeatedly, and given a good supply of water. The other plant was set in a small hole, the ground all around the plant hard and dry; it has been watered only occasionally. The first-named plant is in an extraordinarily flourishing condition, while the last-named is only about one-fourth as large. I measured one leaf on the large plant Dec. 1, and it measured 8 feet long and 5 feet 7 inches broad in the middle. Now, which plant think you will give the largest cluster of fruit when it comes to bearing?

Let us contrast the extra-large hives, large queens long-lived, and long-lived workers, with the small 8-frame hives, small queens short-lived, and short-lived workers, and see how we come out. For queens and workers reared on the nucleus plan are short lived when compared with those of the first-named class. The extra-large colonies are always in a condition to take advantage of a honey-yield whether late or early, unless the apiarist has deprived them of all their stores at a season when he ought not.

Our orange-blossom yield comes very early here. See the case of the large colony gathering 60 pounds of orange-blossom honey mentioned above. You see they were in a state of Nature—neither Gallup nor Alley had ever tinkered with them.

Now, we will take the small hive with the nucleus-reared queen. Early in the spring the colony is weak in numbers because they are so short-lived. The first move they have to make is to rear brood to replenish their numbers, and by the time their numbers are built up the season is passed and nothing stored, and if there is another yield the bees are in a starving condition and must be fed. Now, I hold that a large natural colony is self-sustaining at all times, even in our dryest seasons. For I never have seen the season that there was not a short flow from some source, and your large colony with long-lived bees is in a condition to fill up in a very few days. I never could see the propriety of having an extra-large number of colonies on hand, if one-half or more were productive. Why not reduce the number and have all productive, and produce more honey? If all can not be brought (approximately) up to the standard of perfection, please give the reason.

Orange Co., Calif.

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

That Much-Talked-of Hat-Pin.

In regard to that oft-referred-to hat-pin, it was only a plain, black-headed hat-pin. Nothing unusual about it that I know of. I am going to try a white-headed one next summer, to see if it affects the bees the same way.

Mr. Whitney, if your locks were only long enough to do up on top of your head, you would find a deal of comfort in that same hat-pin, aside from giving the bees something to play with.

Cotton-Waste for Smoker-Fuel.

We have used cotton-waste for smoker-fuel a good deal—such as has been used for journal-packing on car-wheels. It is easily lighted and burns well; it also lasts well. I never liked to handle the stuff very well, and it has a very disagreeable, oily odor. When smoking bees out of sections we were afraid to use it, for fear it would spoil the flavor of our nice, white sections of honey, but at other times it is excellent. It is, however, not always easily obtained.

Dead Bees on the Cellar-Floor.

Are you keeping the dead bees swept up in your cellar? Better do it. It will help to keep things sweet and clean.

We would not like a lot of dead people lying around on the floors of our homes. I don't believe the bees do, either. How promptly everything objectionable is carried out of their hives when they are out-of-doors, able to fly, and do their own house-cleaning.

If it happens to be anything too big for them to get out, they will cover it over with propolis. They keep everything dainty and sweet about their premises. Too bad to make them suffer bad odors when they can't help themselves.

Another thing to be taken into consideration is the health of the people living over the cellar. To live over a cellar with foul odors is not the healthiest thing in the world; and our own health ought to be reason enough for keeping it clean, even if we cared nothing for our bees.

Cleaning Out Unfinished Sections and Frames.

I agree with Mr. Bevins in his plan of cleaning out unfinished sections. That is the way I have done for two years, only on a smaller scale. The only difference is, I have not used the burlap over them, which is a good plan where there are a good many, but as I did not have so many I would not have thought of doing so. I put in the supers four or six of the section-holders, and then set the super on the hive, then uncapped where the honey was, and set six or more about on the holders, then put on the cover, and the bees did nice work for me. I did not put them close together so they could get at them all over. I would take them out when clean and put in more, so they have done good work for two years. In that way, as Mr. Bevins says, the colonies that need it get it, and no chance for robbing, as the other bees do not know it is there.

I told in a previous article of uniting my bees and putting the frames that had honey in on top of the ones I united. I got them all cleaned out as nicely as the sections, and some of the frames I gave to others that might need more. So I have a nice lot ready for use when the time comes to need them.

I write this for the sisters who, like myself, are doing a small business with bees; it is not for those who have a large bee-business; they know all about it.

The gentleman who thinks a woman can't drive a nail is very much mistaken. I have made all my hives ever since I have had bees. I made them out of dry goods boxes, at that, for they were much cheaper than other lumber, and my means are limited.

Now as to the one who is stopping the paper in the winter. I think she will miss it, for that is the time when bee-keepers will have more time to give their experiences. I could not think of doing without it, especially since the sisters have a department. I look for that the first thing, and must see all the headings. Some time I will tell the sisters how I dressed at first, and how I dress now, and how I water the bees early in the spring to keep them from getting chilled.

I suppose I am about as old as any of the sisters, as I am in my 79th year. MRS. SARAH J. GRIFFITH.
Cumberland Co., N. J., Jan. 30.

Seventy-nine years old, and makes all her own hives out of dry goods boxes! Mrs. Griffith must be able to use a saw as well as a hammer. Who can beat that record? We shall look with interest for her further communications. It is pleasant to know that a practical bee-keeper of her age enjoys the new department.

For Chapped Hands.

To make a salve for chapped hands take an ounce of yellow beeswax and olive oil and melt them together slowly on the stove or in the oven. Pour into a couple of egg-cups which have previously been wet with cold water. When the salve is cold turn it out and it will be ready for use.—"Health and Beauty" Department, Daily News.

✻ The Afterthought. ✻

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, O.

EXPERIMENTING WITH CATNIP.

Thanks to Mr. J. E. Johnson for putting an acre in catnip. Of course he must tell us how it pans out. Hardly do to assume, as he does, that catnip is *proven* to be an abundant yielder at all times by the mere fact that bees nearly always seem to be on it. In time of dearth bees will work for a small fraction of a yield. Mr. J. will be of decided interest and value to us, if he lives up to his program, even in a normal location. What is wanted is a ten-acre island five miles out from a pleasant coast—apiary on the main—and a single good hive taken out just when something experimental promises a yield. Page 23.

FEW OR MANY BEES REARING A QUEEN.

We grant it, Mr. Alley, that bees that earnestly want a queen will do the best they can, whether they be few or many; and that bees half undecided in mind whether to finish rearing the brat or to pull her out, and eat what the cell contains, they may not do the best they can. The result in the latter case is not likely to be an article to go in the first class. I think, however, that the question of outside temperature nights and odd times jumps to very great importance whenever the bees are very few. (See also Adrian Getaz, page 55, on this point.) Mr. Alley may be pretty nearly right in the rare case of ten days of unbroken high temperature, and plenty of all kinds of food at hand in the hive. Page 24.

THE SLUGGARD'S BEE-ESCAPE.

Lazy man's bee-escape (not knocking J. M. Young, page 29): wait till cold weather and pull the top all off at night.

CHARM AND DESPAIR OF BEE-KEEPING.

You can't solve it like a mathematical problem and have it forever done with. If you assume that you have done so, you'll get left some time, sure. This was inspired by the following good sentence of yours, dear Boss: "Therein lies the charm, and at the same time the despair, of bee-keeping." Page 35.

SPARING THE PESTS (?)

Yes, spare the kingbirds because they chase hawks—and spare the hawks because they eat mice—and spare the mice because they eat the worms in our combs—and spare the worms 'cause if the bees didn't have 'em to contend with they would get shiftless, and lose their vim and go. At last accounts mosquitoes may yet be killed. Page 35.

HIVES WITH PORTICO AND SLIDING SCREEN.

Nice—the way Mr. Holtermann has things, page 38—every hive with a portico and every portico with a sliding screen. When nothing honest is doing, and you want to open hives, every colony not under manipulation can be shut in. This can sometimes be done without their knowing it, and with the minimum of worry on their part when they do know it. Some would decide that the extra cost and work of making such hives and the care of keeping them ready to spring at any time would be too much. That is, too much for the few cases they would actually use the device, in their style of doing things. Law unto himself, each bee man must be, in such decisions.

WHAT AND HOW TO READ.

Mr. Doolittle, on page 39, was just right in telling us not to waste our time and addle our minds (and souls, too,) as some incline to do when business is slack. He was right also to urge the reading of bee books and papers in a more deliberate and systematic way than possible in busy times—the re-reading and comparison of them. Still, let me lead on a little further. Can't you chop off a magazine or two, which are merely pretty, and sadly near to being nothing else, and give some earnest hours to reading real and up-to-date information? Take one of those magazines which scan the whole field of human research and human life and give a succinct of it weekly. So far as I know there are but two (both New York), The Literary Digest, and Public Opinion. If you get a sample of each you will see which one it is you want. "Knowledge for its own sake" is a drum I incline to beat on pretty loudly. If you have considerable acquisitions outside of bee-lore you'll be wiser in bee-lore too. Each kind of truth helps each other kind—helps it to expand the mind and make a broad, mellow, ripe man. Ah, me! but oft it tears things up fearfully in the process.

"A HUNDRED YEARS AMONG THE BEES."

So Dr. Gallup knew queens, and presumably beans, as long ago as 1835. If he holds on a bit he'll be able to write "A Hundred Years Among the Bees." Page 40.

Questions and Answers.

CONDUCTED BY

DR. O. O. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

Queen Died on the Alighting-Board.

This (February 2) has been the best day for flight that our bees have had since before Thanksgiving, and they have taken full advantage of the opportunity. I have one colony of beautiful Italians, and to my grief I found the handsome queen lying struggling in death on the alighting-board. She lived possibly fifteen minutes after I discovered her. What was the probable cause of this? The colony has always been healthy and has done fine work for two seasons. The queen is two years old. It is possible that a younger queen is still in the hive? How early should I give them brood, or introduce a new queen? "WREXAM."

ANSWER.—It is hard to tell why the queen was killed. It is, of course, possible that there is a young queen in the hive, but I'm afraid not. Let them alone till bees begin to fly nearly every day, and then give a frame of brood, unless you find brood already present. If they start queen-cells, you may be pretty sure there is no queen present, and then the sooner they have a queen the better; perhaps the best way being to unite them with a weak colony having a laying queen.

Wants Honey, Not Increase—Locality and Size of Hive.

I have fifteen colonies of hybrid bees in 8-frame hives from which I would like to take as much comb honey as possible next season.

1. Which do you think would be the better plan, to let each colony swarm once, thus doubling the number, or prevent swarming altogether?

2. What do you consider the best method of keeping bees from swarming? The plan I have followed was to keep cutting out the queen-cells every six days.

3. Do you think locality determines the size of hive to be used? Some say the 8-frame hive is the best for this locality.
MICHIGAN.

ANSWERS.—1. That depends on circumstances. In any place you will probably get more honey if you do no increasing, *providing* you start the season with all the colonies the locality will support. If the locality will support more bees than you have, you will still do better without increasing if your harvest closes early. But if you have a good flow late enough so that when a colony swarms both the swarm and the mother colony will have time to build up strong for the late flow, then it will be better to have one swarm from each colony.

2. Perhaps the plan of making a shaken swarm is more in favor just now than any other, especially when working for comb honey.

2. Not only locality, but the honey-flow, and the management, make a difference as to whether an 8 or 10-frame hive is better.

Honey-Extractors—Frames—Supers—Foundation, Etc.

1. I notice in a catalogue that the Cowan honey-extractor, No. 15, is made for the Langstroth frame, of which the top-bar is $18\frac{3}{4}$ inches long and $9\frac{1}{8}$ inches deep. My frame top-bar is $18\frac{1}{2}$ inches long and 6 inches deep. Can I extract from this frame in that size extractor?

2. I am going to buy an extractor. Would you advise me to buy a No. 15 Cowan?

3. Do you think a frame of that size is a good extracting frame?

4. Last year (1902) I was producing comb honey, and my bees stored about 60 salable sections. Now, I want to know how many supers, 8-frame, I ought to have ready?

5. Does a frame of this size require wiring?

6. How many pounds of foundation will it take to fill 200 frames of that size?

7. How far from the bottom-bar ought it to be?

8. How far from the end-bar? OREGON.

ANSWERS.—1. Yes.

2. Unless you expect to use frames larger than the Langstroth I think you will find it will suit your purpose all right.

3. Yes, 6 inches is a good depth for an extracting-frame.

4. You do not give sufficient data upon which to base an answer. If I understand you correctly, you had last year an average of 60 salable one-pound sections per colony. But you do not say whether that was an unusually small, unusually large, or an average yield. If that is an average yield, the probability is that you ought to have for each colony not less than three extracting-supers containing frames such as you describe. You should figure to have enough to meet the needs of the best year.

5. You can use a frame 6 inches deep without wiring, but it will be better with it.

6. That depends on the kind of foundation you use. If you use light brood, it will take something like 17 pounds.

7. About $\frac{1}{4}$ inch.

8. It may touch the end-bars, and at most should not be more than $\frac{1}{4}$ inch from them.

Doolittle's Comb-Honey Management--Ripening Honey.

I am studying Mr. Doolittle's book on ientific Queen-Rearing." In the back part of it he tells how he does the work to produce comb honey. I cannot understand all of it, and it seems to me that he uses a different hive than we do, perhaps. We use 8-frame Langstroth hives.

1. Does he put only one super on a hive during the whole honey-flow?

2. On page 126, what does he mean by shutting the bees out of the side boxes? We could do nothing of the kind, as I understand our hives.

3. What does he do with his sections, to ripen the honey, and not have the moths get into it? As I understand him, he takes away all the capped honey once a week, or oftener, if needed.

4. He says, raise the cases, sections and all. Does he mean raise a section-holder full of sections? We use the $4\frac{1}{4}$ by $4\frac{1}{4}$ by $1\frac{1}{2}$ section. Any explanation that would make it plain would be appreciated by me.

5. Will honey ripen as well kept in a store-room as if kept over a colony of bees? IOWA.

ANSWERS.—1. If I am not mistaken, Mr. Doolittle, in his excellent work, is speaking of the Gallup hive, which he formerly used chiefly if not entirely. I think he is speaking of one super on a hive, using something like wide-frames in these, but he also uses part of the lower story to receive these wide-frames at each side.

2. I suppose that when he speaks of shutting the bees out of the side-boxes he means the spaces in the lower story at each side of the brood-frames. Of course you could do nothing of the kind with 8-frame Langstroth hives.

3. He puts the sections in a honey-house with black walls and roof, where they will be kept very hot by the heat of the sun. As to wax-worms, with the kind of bees he has (an excellent strain of Italians) the likelihood is that he need pay no attention to the moth or its larvæ. Formerly, when he had more black brood among his bees, I think he fumigated his sections about every two weeks.

4. Yes, he means raise a frame or case full of sections from the lower to the second story.

If I have in any way misinterpreted our friend, Mr. Doolittle, I hope he will set us straight.

When to Order Queens—8 vs. 10-Frame Hives.

1. I desire to send for three Italian queens for spring or summer. At what date ought I to order them sent to me?

2. Please give the advantages and disadvantages of 8 and 10-frame hives, respectively, for use in Northern Illinois? I find but little in text-books, to which I have access, on the merits of 8 and 10-frame hives.

3. Do you confine a queen to eight combs, or do you sometimes, in the spring, place one hive-body and combs on another, and allow a queen to use 16 frames for brood-rearing, or a larger number than 8 frames?

4. Is it practical to allow a queen to occupy more than 10 frames for brood-rearing? If so, how is it managed?
ILLINOIS.

ANSWERS.—1. That question may be understood in two ways. You may be asking as to the date when you shall order, or the date when you want them sent. In any case you will do well to order some time before you want the queens sent. If you have "money to burn," and care nothing about price, then put in your order right away for tested queens to be sent you about the middle of May, or as early as you can have a good place to put them. If you think it advisable to send for untested queens, then order them to be sent about the middle of June. It will be difficult for you to get them before that, and if they are reared much before that time there will be some doubt about their being quite as good as later-reared queens. If you don't mind sending a distance, you may be able to get them from the South a month earlier.

All this is on the supposition that you want to get all the benefit from them this year that you can. But it would have been still better, in order to get the best results from them this year, if you had had them sent last July, August or September. I would a little rather have a queen reared during a good honey-flow, and it is easier to get them then at a fair price.

2. It takes less watching and manipulation to get and keep a colony strong in a 10-frame hive, and to keep them from starving. The smaller hives are lighter to handle, take up less room, and sometimes a colony can be got to work sooner in a super if in the smaller hive.

3. If I were not allowed in any case to give a second story to give a queen room, I certainly should not think of using 8-frame hives. If possible, I should like always to have every colony so strong before the harvest that it would need a second story.

4. It is managed by simply adding a second story *below* just as soon as the first story is filled, or a little before that time. Many a time 10 frames will not be enough, and 15 may be needed. But when supers are given, each colony is reduced to one story.

FROM MANY FIELDS

Prospects for a Good Crop.

I had a short crop last season, 3,000 pounds from 90 colonies—2,500 pounds of extracted and 500 pounds of comb honey. I put 110 colonies into winter quarters. We are having a fine season, and things look now as though we may have a good honey crop in 1903 if the Mexican boll weevil does not cut off our cotton flow. If it does, it will be hard on us in this part of Texas.

Later I will write something on foul brood in Texas, and how I manage it. I have not had a case of it in three years in my apiary. LON ROSSON.

Ellis Co., Tex., Jan. 17.

Bees Wintering All Right.

I have 70 colonies of bees in the cellar and they seem to be doing all right. The prospects for honey the coming season are good. GEORGE A. OHMERT.

Dubuque Co., Iowa, Jan. 30.

"Shoestring" as a Honey-Plant.

I take much pleasure in looking at the illustrations and readings of the different honey plants. As I see nothing mentioned of the "shoestring" as a honey plant, I will send a specimen. It commences to bloom about July 1, stays in bloom for about three weeks, and yields abundantly for about ten days. I had one colony that gathered 60 pounds of honey while the shoestring was in bloom the past season. The plant grows from 12 to 20 inches high, and has from 6 to 10 heads on the stalk. It grows on the prairies abundantly in this part of Nebraska.

I had a colony of bees that I divided and got 160 pounds of honey from the parent colony, and each had ten frames well filled in the brood chamber for winter stores. My bees are a cross between Holy Lands and Italians.

I like the AMERICAN BEE JOURNAL very much. JAMES SANFORD.

Wheeler Co., Neb., Jan. 28.

Poor Year for Bees—Shade-Board.

Last year was a very poor one for bees. I got only 145 pounds of honey from 10 colonies and increased to 15. But like the rest of us, I have hopes for a better year.

Three 12-inch boards, each 36 inches long, cleated at each end, make a very good shade-board, as I have found. G. B. WILLIAMSON.

Jones Co., Iowa, Feb. 5.

Forced Swarming.

My! how it is snowing at this writing—3:40 p. m.—and I can find nothing to do but to interview the heaps of bee papers (AMERICAN BEE JOURNAL, a weekly visitor) which are stacked up in my bookcase.

Yes, and the way those two jolly bee veterans cross swords is fine. Sail in, for I love a battle of royalty when there is a queen at stake.

I wonder if you had not better be careful in making brushed swarms before they start cells to supply the wants of the parent colony, or there may be a forerunner of profligacy in the parent colony, unless supplied with royal cells, or a queen from no less than royal cells. Did our veterans ever discuss this question?

J. T. Hairston says, on page 55: "As to forcing before or after cells are started,

PERSONAL TO SUBSCRIBERS

WE WILL SEND to every subscriber or reader of the American Bee Journal a full-sized ONE DOLLAR package of VIT.E-ORE, by mail, POSTPAID, sufficient for one month's treatment, to be paid for within one month's time after receipt, if the receiver can truthfully say that its use has done him or her more good than all the drugs and dopes of quacks or good doctors or patent medicines he or she has ever used. Read this over again carefully, and understand that we ask our pay only when it has done you good, and not before. We take all the risk; you have nothing to lose. If it does not benefit you, you pay us nothing. VIT.E-ORE is a natural, hard, adamantine rock-like substance—mineral—ore—mined from the ground like gold and silver, and requires about twenty years for oxidization. It contains free iron, free sulphur and magnesium, and one package will equal in medicinal strength and curative value 800 gallons of the most powerful, efficacious mineral water, drunk fresh at the springs. It is a geological discovery, to which there is nothing added or taken from. It is the marvel of the century for curing such diseases as Rheumatism, Bright's Disease, Blood Poisoning, Heart Trouble, Diphtheria, Catarrh and Throat Affections, Liver, Kidney and Bladder Ailments, Stomach and Female Disorders, La Grippe, Malarial Fever, Nervous Prostration and General Debility, as thousands testify, and as no one, answering this, writing for a package, will deny after using. Give age, ills and sex.

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8E3t **THEO. NOEL COMPANY, Dep't J. P., 527, 529, 531 W. North Ave., Chicago, Ill.**

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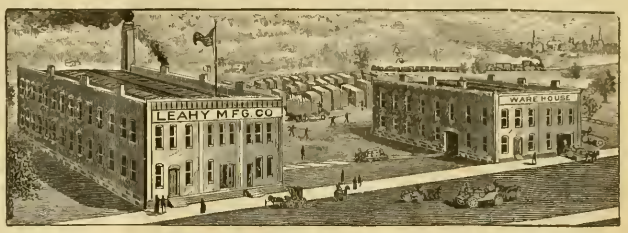

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Retail and Wholesale.

This foundation is made by a process that produces the superior of any. It is the cleanest and purest. It has the brightest color and sweetest odor. It is the most transparent, because it has the thinnest base. It is tough and clear as crystal, and gives more sheets to the pound than any other make.

Working wax into Foundation for Cash a Specialty. Beeswax always wanted at highest price.

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The wonderful new **Gold and Silver Flower** is the best floral novelty for 1903. Never before offered in the U. S. and cannot be obtained elsewhere. Large silvery white, intensely double flower with center of gold. Must be seen to be appreciated. Price 25 cents per packet, but if you will send us before March 15, the addresses of three persons who cultivate flowers, and two 2 cent stamps, we will send you a full sized packet to pay you for your trouble. Also a copy of our large, beautiful catalog, containing hundreds of illustrations, many choice novelties and bargain prices on seeds, plants and bulbs, mailed free if you mention this paper. **FREE**

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$300,000,000.00 A YEAR and you may have part of it if you work for us. Uncle Sam's poultry product pays that sum. Send 10c for samples and particulars. We furnish capital to start you in business. **Draper Publishing Co., Chicago, Ill.**

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Complete stock for 1903 now on hand. Freight rates from Cincinnati are the lowest. Prompt service is what I practice. Satisfaction guaranteed. Langstroth Portico Hives and Standard Honey-Jars at lowest prices.

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SPECIAL OFFERS.—On all cash orders received before April 1, 1903, we allow a discount of 2 percent.

To parties sending us an order for Supplies amounting to $10.00 or more, at regular prices, we will make the following low rates on Journals: Gleanings in Bee Culture (semi-monthly) 50c; American Bee Journal (weekly) 70c. List of Agencies mailed on applicaiion.

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Every Day 1903, the Union Pacific will sell One-Way Colonist Tickets at the following rates: : : : ; ;
From February 15 to April 30,

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$20.00 to Ogden and Salt Lake City.
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423 WALNUT ST., KANSAS CITY, MO.
Also dealers in honey and beeswax. Catalog free

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We'll sell you a better hatcher for the money than any other incubator concern on earth. New improved regulator, that can't get out of order. Big book—200 illustrations free.

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Regulation dovetail with 7/8 Warp-Proof Cover and Bottom. Costs more, but sold at same price as regular.

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THE FRED W. MUTH CO.
HONEY AND BEE-KEEPERS' SUPPLIES,
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it doesn't make any difference; only if the apiarist has as many colonies as he wishes, he should force only those that have cells started, as they would swarm anyway." Now, Mr. Hairston, I challenge that statement (mind, in a friendly way), that is, if you do not comply with the aforesaid reasons. If you left the parent colony with either queen or cell they would be forced queens that had hatched, and not hatched as Nature intended. For Nature forces nothing, but everything exists simply because it is needed.

Now, to illustrate this theory: You are expecting to go away in two days and you must fit up 3,000 sections with full sheets of foundation, as you will not return until after it is time to put them on. You get the foundation, and you find you have only enough for about 500, that is, if you use full sheets, but you cannot, as you will not have time to get any more, and you must fit up all of the sections with some foundation. Now what? Why, you are forced to use starters. Had you known in time, you would have been prepared and had plenty of foundation for the 3,000 sections, and could have used full sheets, and by doing that you see you could have done as you intended, instead of being forced to do something that you did not intend to do.

ROBERT J. CARY.
Fairfield, Co., Conn., Jan. 26.

Poorest Season in 20 Years.

The last season was the poorest one for honey we have had in this locality for over twenty years. No honey in this locality, and bees that have not been fed will all starve before spring, I think. I fed mine too late, and I am afraid they will not winter very well. C. JOB.
Putnam Co., Ind., Jan. 17.

Prevention of Increase.

As soon as I see a colony preparing to swarm, as indicated by starting queen-cells, I smoke or drum on the hive to cause the bees to gorge themselves with honey. I then lift the hive from the old stand and put a new hive on the old stand, prepared as follows: Put two frames of honey, one in each end of the hive (I use the Gallup frame), then fill the hive with drawn comb, or full sheets of foundation; now put a sheet of wire cloth on the new hive, and the old hive on top. Put the queen and shake most of the bees into the new hive, cut out all queen cells, alow a small entrance to the upper hive, close the hive up snug and warm, and the job is done, until the brood nest below is well established, which will be in about ten days. I then take a look for queen cells that I fancy are present; I cut them out, then the wire cloth is removed and a queen-excluding honey board put in its place. I have tried putting the brood above the queen excluders, but it gave very poor results, the bees seeming to rush up to the brood, and I think they killed the queen because she would or could not go there also. J. M. CRUICKSHANK.
Ontario, Canada, Jan 26.

Bees Probably Lost from Spraying.

Five years ago I had 50 colonies of bees, fall count. The following summer I lost 17 colonies. They came through the winter all right, were very populous and did extra well until apple bloom came, when I began to notice a decrease in the bees. One colony, in particular, which was in an improved Simplicity hive and about ready to swarm, had a good start in the super, a fair size swarm hanging on the outside of the hive, when, all at once, during apple bloom, there were no bees on the outside of the hive and none in the super. The colony did not die, but did nothing since then, until last summer it partly filled a few sections, and stored all the honey they will need this winter. As noted, the in-population of so many colonies as compared with the others, I wondered what was the matter, and as it was the busy season for carpet weaving, I could give them but little attention. My thought was, they had lost their queens, but the workers appeared all right and contented. A neighbor called one afternoon and we went among the bees, did some looking into the why of the trouble. We did not find a queen, but found worker-broods scattered over the comb. The combs were all cleaned and bright, so we concluded there was no foul brood. At another time, on further investigation, I found the same condition of things, and a large, beautiful, two-banded queen. She was stupid and did not care to get out of the way. Another colony had dwindled until the worms had taken it. I took one side and opened it so the bees could get what honey was left. I found another nice, large queen, and she was in a stupid condition, just able to go about.

The following and the last two summers I have lost 12 colonies. I now have 20 colonies, so you see I have lost more than I have gained.

Toward the latter part of the second summer I began to suspect that some one near by had sprayed their fruit trees when in full bloom, and on inquiry found my suspicions were correct. One of my neighbors, living half a mile away, had bought a spraying outfit of the Quincy man, Stahl, and he advises his customers by all means to spray their fruit trees

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IN SPLIT HICKORY.

SPLIT—NOT SAWED.

That's why we make all our vehicles of this superior material, why they last, wear and look right. No flaws covered with paint and varnish. Everything perfect. Our

Split Hickory Winner TOP BUGGY

we will send you on 30 DAYS' FREE TRIAL

$40

Hitch up to it, use it freely. When the 30 days are up, if you are not more than satisfied send it back—the trial costs you nothing. Our free catalogue tells all about it and our other bargain offers. Send for it today. A full line of harness.

OHIO CARRIAGE MFG. CO.,
Station 6 Cincinnati, Ohio.

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Grand New Book

Self Supplied Moisture

for 1903, "How to Make Money With Poultry and Incubators." Size 8x11 inches, 196 pages. Contains among its many other invaluable things for Poultrymen the following **Special Chapters:** I. Starting With an Incubator; II. Handling Chicks in an Incubator; III. Feeding the Chicks: IV. Duck Producing on a Large Scale; V. Broiler Raising; VI. Profitable Egg Farming; VII. The Egg and Poultry Combination; VIII. Egg and Fruit Farming; IX. Scratching Shed House Plans; X. Incubator and Brooder House Plans; XI. Feeding for Eggs, and XII. Standard Bred Poultry. We usually request 10 cents to pay for the mailing of this book, **but for the next 30 days we will mail it free to any one who will mention this paper in writing.** Better write now, "lest you forget." Address nearest office.

CYPHERS INCUBATOR COMPANY,
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We have received a car-load of these unique supplies. These goods are equal to if not the best on the market. Give us a trial order. We are also agents for the PROGRESSIVE BEE-KEEPER, price, 50 cents per year. Send your orders and subscriptions to us. We sell at factory prices.

W. D. FULTON,
Catalog Free. Garden City, Kan.

SHEEP MONEY IS GOOD MONEY and easy to make if you work for us. We will start you in business and furnish the capital. Work light and easy. Send 10 cents for full line of samples and particulars.
DRAPER PUBLISHING CO., Chicago, Ills.

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SPECIAL OFFER:

Made to Build New Business. A trial will make you our permanent customer.

Prize Collection Radish, 17 varieties; Lettuce, 12 kinds; Tomatoes, 11 the finest; Turnip, 7 splendid; Onion, 8 best varieties; 10 Spring-flowering Bulbs—65 varieties in all.

GUARANTEED TO PLEASE.

Write to-day; Mention this Paper

SEND 10 CENTS

to cover postage and packing and receive this valuable collection of Seeds postpaid, together with my new Instructive, Beautiful Seed and Plant Book, tells all about the Best varieties of Seeds, Plants, etc.

H.W.Buckbee ROCKFORD SEED FARMS
Dept. L.35, ROCKFORD, ILL.

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EVERGREENS

Hardy sorts, Nursery grown, for wind-breaks, ornament and hedges. Prepaid $1 to $10 per 100--50 Great Bargains to select from. Write at once for free Catalogue and Bargain Sheet. Local Agents wanted.

D. Hill, Evergreen Specialist, Dundee, Ill.

Have You Seen Our Blue Catalog? 60 illustrated pages; describes EVERYTHING NEEDED IN THE APIARY. BEST goods at the LOWEST prices. Alternating hives and Ferguson supers. Sent FREE; write for it Tanks from galv. steel, red cedar, cypress or fir; freight paid; price-list free.

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Agencies: Trester Supply Co., Lincoln, Neb.; Shugart & Ouran Council Bluff Iowa; Chas. Spangler, Kentland, Ind.
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Second-Hand 60-lb. Cans, 2 in a Box.

We have a large quantity of these Cans that we have emptied ourselves, saving the best of them. There may be, however, an occasional can that needs repairing, or is not usable, but we think such are very few. But in view of this, we will throw in an extra box of 2 Cans with each 10 boxes ordered, and assume no further responsibility, especially as the prices are very low, viz.: 5 boxes, 40c a box; 10 boxes, 35c a box; 20 or more boxes, 30c a box—all f. o. b., Chicago. We make these low prices in order to close them out quickly to make room for other stock. Order at once if you want any of them. Address,

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for this team harness, cut from oak-tanned leather, traces 1½ in. 18 ft. lines: Hook & Territ pads. 98 styles to pick from. Single harness $4.45 to $21.00. Double, $10.00 to $45.00.

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for this 12-16 all steel disc harrow; has genuine Ladow bumpers. Dust proof oil tubes. The Most Perfect Made. We have other style discs for $15.25. We save you about 1-3 in price.

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steel lever harrow; cuts 10 ft; 60 teeth, 2 sections.

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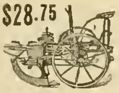
Steel Beam Cultivator, plain, with 5 shovels.

$8

Mathews New Model garden drill, large size with 11 tools. $4.75 for the Com as drill only, same principle as above. If you want a garden tool, write us.

$28.75



Calumet check row planter with automatic reel and 80 rods wire. Never misses, drops in hills and drills. We challenge the world with this planter. Will ship on trial.

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for this 2 horse cultivator. Retails at $15 to $18. $15.95 for riding cultivator. Seven styles, 25 combinations. Most Wonderful Cultivator Bargains ever offered. Also Plows.

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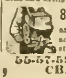
One-Horse Corn, Bean and Garden Seeder. Drops in hills and drills 12 acres a day.

50c for Triumph Corn planter



80c Crank Seeder. Sows wheat, oats and grass seed 4 to 10 acres an hour. Five other styles. Send for catalogue.

Send for Our Catalogue It has 432 pages, size 9x11 inches. Postage is 15c, but if you will cut this ad out and send it to us we will mail the catalog FREE. MARVIN SMITH CO., 55-57-59 N. Jefferson St., CHICAGO, ILL.

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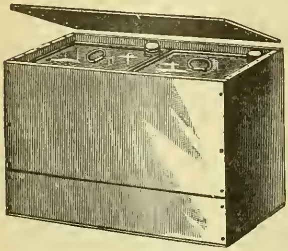
THE BEST
White Alfalfa Honey
ALL IN 60-LB. CANS



A sample by mail, 10c for package and postage. By freight, f.o.b. Chicago: 1 box of 2 cans (120 lbs.) at 8½c a pound; 2 boxes or more (4 or more cans), at 8c a pound. We can furnish Basswood Honey at ½c a pound more. (These prices are for selling again).

This Alfalfa Honey should go off like hot-cakes. Better order at once, and get a good supply for your customers.

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144 & 146 E. Erie Street, - CHICAGO, ILL.

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Cotalog Free. Round Rock, Tex.

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SEND AT ONCE
25c for our great Garden Seed Collection. 10 big packages finest vegetables. 25 varieties for 50c.
25c for our beautiful Flower Seed Collection. 10 large packets beautiful flowers. 25 varieties for 50c.
Both 25c Colls. for 40c—both 50c Colls. for 75c.
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25 years the best.
Send for Circular.
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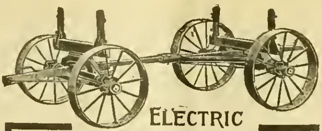

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Handy Farm Wagons
make the work easier for both the man and team. The tires being wide they do not cut into the ground; the labor of loading is reduced many times, because of the short lift. They are equipped with our famous **Electric Steel Wheels**, either straight or stagger spokes. Wheels any height from 24 to 60 inches. White hickory axles, steel hounds. Guaranteed to carry 4000 lbs. Why not get started right by putting in one of these wagons. We make our steel wheels to fit any wagon. Write for the catalog. It is free.
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That our line of Bee-Keepers' Supplies are some of the best goods in the world, and that our system of dealing with our trade is not excelled by anybody. Plenty of testimony from satisfied customers proves these things. Write and get our suggestions, our catalog and our discounts for winter-time orders—ALL FREE.
The Largest Stock of Bee Keepers' Supplies in Indiana. C. M. SCOTT & CO.,
1004 E. Washington St., INDIANAPOLIS, IND.
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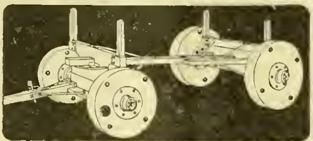

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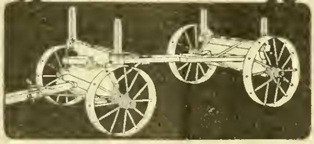
have easier work when a low-down handy wagon is used. Low down, it is easy to load; wide tired and low draft it is easy to move. Short turn makes it easy to go around short turns or into narrow places. A man saver and a horse saver. Wood or metal wheels, and all at prices so low that no farmer can afford to be without a Farmers' Handy Wagon. Our new catalogue, just off the press, is the best we have ever published and will be mailed you free if you ask for it.
FARMERS' HANDY WAGON COMP'Y
SAGINAW, MICH.



28 cents Cash paid for Beeswax.
This is a good time to send in your Beeswax. We are paying 28 cents a pound—CASH—for best yellow, upon its receipt, or 30 cents in trade. Impure wax not taken at any price. Address as follows, very plainly,
GEORGE W. YORK & CO., 144 & 146 Erie St., Chicago, Ill.

Marshfield Manufacturing Company.
Our specialty is making SECTIONS, and they are the best in the market. Wisconsin BASSWOOD is the right kind for them. We have a full line of BEE-SUPPLIES. Write for free illustrated catalog and price-list.
Marshfield Manufacturing Company, Marshfield, Wis.
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when in full bloom. I am told bee-keepers are having the same experience around Glasford, because of the fruit trees being sprayed while in bloom. How can bee keepers get out of such trouble? Move out, or is there some other way out?

Peoria Co., Ill. GEO. B. SLACK.

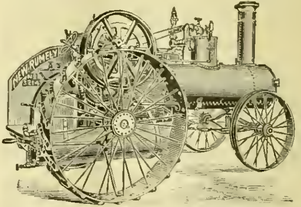
(The only way we know is to get a law enacted against spraying fruit trees while in bloom, and then enforce the law.—EDITOR.)

Brushing Bees Off Combs.

On page 803 (1902), on "Brushing Bees From Combs," Editor Hill gives Mr. Poppleton's plan of getting ahead of the dodgers when clearing extracting combs of bees, with strong feathers. I think the Pickard homemade bee brush away ahead of the stout feathers. The general procedure is about the same. Instead of resting the comb on the frames, I take the combs by the upper corner and hold it in front of the hive and with a downward stroke of the brush throw the bees down in the grass. I then treat the other side the same, then brush both sides with a quick motion, something like whetting a scythe. In the meantime my assistant gets another comb loose and gives it a shake or two, dislodging most of the bees, then passes it to me, and I dispatch the dodgers in short order.

The Pickard bee brush was illustrated about two years ago. I have used it two seasons, and would not be without it. It

THRESHERMEN
have come to realize the fact that for high and permanent service, there is no power they can take into the field so satisfactory as the



RUMELY TRACTION ENGINES.
Modern invention shows at its best in their making. They have no superfluous parts or trappy devices. Rear Geared with steel gearings. Cross heads and slides are protected from dust. Cut shows single cylinder. We make also double cylinder engines. Burn wood or coal, or straw in direct flue. Late catalogue describes fully this matchless Engine line and famous New Rumely Separators. Mailed free. Write.
M. RUMELY CO., La Porte, Indiana.
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POULTRY PAYS

when the hens lay. Keep them laying. For hatching and brooding use the best reasonable priced Incubators and Brooders — built upon honor, sold upon guarantee.
Send for Free Catalog
THE ORMAS
L. A. Banta, Ligonier, Indiana
46A20t Please mention the Bee Journal.

A COOL MILLION
of Snowy Wisconsin Sections, and 10,000 Bee-Hives, ready for prompt shipment. Send for catalog—it's free.
3A13t R. H. SCHMIDT & CO., Scheboygan, Wis.
Please mention Bee Journal when writing.

Hives, Sections, Foundation,
etc. We can save you money. Send list of goods wanted and let us quote you prices. ROOT'S GOODS ONLY. Send for Catalog.
M. H. HUNT & SON, Bell Branch, Mich.
Please mention Bee Journal when writing

is easily made. Take an old broom-handle and cut off the length you desire (about 16 or 18 inches), split one end with a rip saw about 9 inches, and take new rope strips about 6 inches long, unwind it and fill in the saw-kerf tight and clamp with a couple of screws. When the brush becomes sticky with honey wash it out, and you are ready for business.

Pierce Co., Wis. A. D. SHEPARD.

Fillmore Co., Minn., Organized.

The bee keepers of Fillmore Co., Minn., including some from other counties, met at Preston on Jan. 16 and 16, and organized "The Fillmore County Bee-Keepers' Association," with 24 members. An interesting program was carried out, and a communication was read from Mr. N. E. France, of Wisconsin.

Much interest was manifested, and another meeting was called, to be held not later than May 1.

More names have been added since the meeting, and it is expected the membership will be doubled before the spring meeting. An effort will be made to maintain just and equal prices of honey the next season.

Officers elected for the coming year are as follows: President, M. V. Facey; vice-president, Edwin Crowell; secretary, P. B. Ramer, of Canton; treasurer, R. A. Hunt. P. B. RAMER, Sec.

Fillmore Co., Minn., Jan. 19.

To make cows pay, use Sharples Cream Separators
Book Business Dairying & Cat.212 free.W.Chester,Pa

CONVENTION NOTICES.

New York.—The annual meeting of the Oswego County Bee-Keepers' Association will be held at Fulton, N. Y., Saturday, March 7, 1903. Prof. Frank Benton will be present and address the meeting. An interesting program is being prepared, and all persons interested in bees are cordially invited to be present.

MORTIMER STEVENS, Pres.
CHAS. B. ALLEN, Sec.

New York.—A series of Bee-Keepers' Institutes will be held in the State of New York as follows: Canandaigua, March 2 and 3; Romulus, March 4; Auburn, March 5; Cortland, March 6; Fulton, March 7; Syracuse, March 9 and 10; and Amsterdam March 11.

Prof. Frank Benton, Apicultural Investigator, furnished by the United States Department of Agriculture at the expense of the Bureau of Institutes of the State Department of Agriculture, will address the meetings.

The New York State Association of Bee-Keepers' Societies will hold its annual meeting at Syracuse, March 10, at 10 o'clock a.m., in the City Hall. Prof. Benton and other prominent bee-men have informed us of their intention to attend this meeting, and a profitable and interesting session is in store for those who attend. Special rates have been secured for entertainment at the Manhattan Hotel, Fayette St., at $1.25 per day. C. B. HOWARD, Sec.

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The Increased Number of Inquiries we are receiving of late in regard to the best and most economical means evidences the fact that the question of Fencing is one of the most important matters in the minds of the farmers of to-day, and that more thought is being given to it each year. There is nothing a farmer can so foolishly waste money on, or that offers a greater field of economy, than the item of Fencing. A cheap fence in quality, as well as in price, is not economy, but a good and strictly up-to-date fence in every particular at a reasonably low price is true economy. In this day and age of improvement the ordinary fence is not good enough for the progressive farmer. It takes something more than the ordinary, and the fencing made by the Coiled Spring Fence Co., of Winchester, Ind., certainly fulfills all these requirements. All the line wires are of high-carbon coiled spring-wire, making it self-regulating in every particular and much stronger and better than any other fence, and being sold to the farmer at wholesale price is within reach of all. It is as advertised, bull-strong and chicken-tight, and sold at a price below many of the styles of fence now on the market. The Coiled Spring Fence Co., Winchester, Ind., whose advertisement you will find elsewhere in this issue, will take pleasure in sending anyone catalog and full particulars regarding this Fencing for the asking. Please mention the American Bee Journal when writing to them.

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HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, Feb. 7.—The market is in rather an unsettled state. The offerings of late have been numerous, and there is a tendency towards lower prices, owing to the supply being much larger than expected at this season of the year. The fancy grades of white will sell at 15@16c per pound, but anything below this grade is difficult to place at anything above 10@12c. Extracted honey is also easy, with the best grades of white obtainable at 7@8c, and ambers at 6@7c. Beeswax steady at 30c upon arrival.

R. A. BURNETT & CO.

ALBANY, N. Y., Jan. 7.—Honey demand and receipts light. We quote white comb, 15 cents; mixed, 14c; buckwheat, 13@14c. Extracted, white, 7@7½c; dark and buckwheat, 7@7½c. More demand for buckwheat than any other here. H. R. WRIGHT.

KANSAS CITY, Jan. 31.—The demand for honey has been very light; receipts fair. We quote as follows: Extra fancy, per case, 24 sections, $3.40; strictly No. 1, $3 30; No. 1 amber, $3 00@$3.25. Extracted, white, per pound, 7c; amber, 6@6½c. Beeswax, 30c. C. C. CLEMONS & CO.

CINCINNATI, Feb 7—The demand for all kinds of honey has fallen off considerably in the last few weeks, owing to the many other sweets offered at this season of the year. Lower prices are no inducement to increase the consumption, as the demand is not there, and will not be until about the end of the month; consequently it is folly to offer at lower prices. We quote amber extracted in barrels at 5¾@6½c; white clover and basswood, 8@9½c. Fancy white comb honey, 16@17c; lower grades hard to sell at any price. Beeswax firm at 30c.

THE FRED W. MUTH CO.

NEW YORK, Jan. 23.—Demand for comb honey quiet on all grades, and prices show a downward tendency. Supply quite sufficient to meet demand, if not more so. We quote fancy white at 15c; No. 1, at 14c; No. 2, at from 12@13c; dark and buckwheat, at from 11@12c.

Extracted also quiet with abundant supplies with the exception of white clover. We quote white at 7c; amber at 6½c, and dark at 6c. Common in barrels from 60@65c per gallon.

Beeswax firm at from 29@30c.

HILDRETH & SEGELKEN.

CINCINNATI, Feb. 7.—The comb honey market continues to be draggy and hardly any demand and therefore prices have weakened. Fancy white clover comb sells for 15@15½c; for amber there is no demand. The market for extracted is fair and prices rule as follows: Amber, 5¼@5½c, by the barrel; in cans it brings a little more; alfalfa, 7½c; white clover, 8@8½c. Beeswax, 28@30c. C. H. W. WEBER.

SAN FRANCISCO, Jan. 14.—White comb honey, 11½@12½c; light amber, 10@11c; dark, 5@6½c. Extracted, white, 6@6½c; light amber, 5@5¼c; amber, 4@4½c. Beeswax, good to choice, light, 26@27½c; strictly fancy light, 29@30c.

The country merchant, representative of trade interests, estimates "entire stock of honey of 1902 in the State at 15 cars," worth 5¾@6c per pound at primary points, subject to a $1.10 freight-rate to the East.

WANTED WHITE CLOVER EXTRACTED HONEY!
Send sample and best price delivered here; also Fancy Comb wanted in no-drip cases.
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That covers the whole Apicultural Field more completely than any other published, send $1.20 to
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—FOR HIS—
"Bee-Keeper's Guide."
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Practical Apiarist Wanted for the season of 1903, or longer, to work with experienced manager of large apiary. State age, experience, references, wages expected, etc. Single man with ability to use carpenter's tools preferred. Address,
P. E. G., care American Bee Journal,
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GEO. W. BRODBECK.

Bees and Pear-Blight.

J. E. JOHNSON.

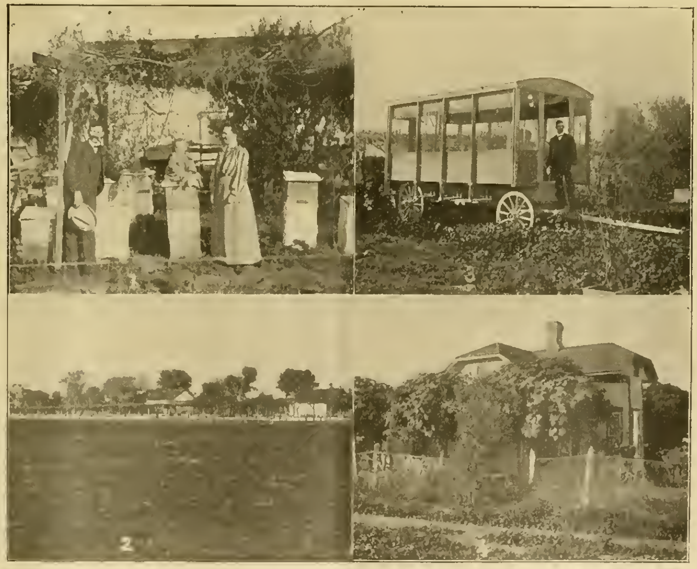
AMERICAN
BEE JOURNAL

43d Year. CHICAGO, ILL., FEB. 26, 1903. No. 9.

WEEKLY

One of Arizona's Bee-Keeping Sons.

(See page 133.)



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THE AMERICAN BEE JOURNAL

PUBLISHED WEEKLY BY

GEORGE W. YORK & COMPANY

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GEORGE W. YORK.

DEPT. EDITORS,

DR. C. C. MILLER, E. E. HASTY, EMMA M. WILSON

IMPORTANT NOTICES.

The Subscription Price of this Journal is $1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

The Wrapper-Label Date of this paper indicates the end of the month to which your subscription is paid. For instance, "dec03" on your label shows that it is paid to the end of December, 1903.

Subscription Receipts.—We do not send a receipt for money sent us to pay subscription, but change the date on your wrapper-label, which shows you that the money has been received and credited.

Advertising Rates will be given upon application.

FROM MANY FIELDS

Shaken or Forced Swarms.

I will try and answer the following questions through the AMERICAN BEE JOURNAL:

"1. I read your article on page 55. Why not shake on wide starters?"

"2. They did not punctuate as you intended. I think you wanted to say that 'after the five frames were filled then insert drawn combs or frames filled with foundation.' Did you not?

"3. I see Mr. Miller, at the Ontario convention, said: 'Do not leave extracted honey open.' Do you agree to this?

"4. Why need we turn hives upside down in transferring?

"5. Our alfalfa blooms about every five or six weeks during summer. Now, why wouldn't you shake at the beginning of every flow, as I want to double my colonies and get the alfalfa honey in supers and let them fill up brood-chamber from heartsease for winter?—F. KINGSLEY, of Nebraska."

ANSWERS.—1. Because if the bees get ahead of the queen in building comb they will build drone-comb. By using half-inch starters the queen, if a prolific one, will keep up with the bees with egg-laying, and consequently there will be less drone-comb built.

2. Yes; I intended to say "and after the five frames are filled the dummies should be removed and space filled with full sheets of foundation or drawn combs."

3. Yes, I agree with you. I never extract until all honey is sealed and well ripened; then I put in a tank holding 3,600 pounds to settle, and seal, as I think it retains its flavor better.

4. In transferring from box-hive I turn the hive upside down, as the honey is at the top, and as the lower end is generally open it is less trouble to turn the hive over; and, besides, if there is any honey in the hive, in tearing off the cover the honey would begin to run, and bees can't be driven over sticky combs. Another reason is, if bees are inclined to rob you are liable to start them.

5. I don't think your bees would build up sufficiently to shake every five or six weeks. If you did shake that often you would more than double your colonies. If your bees are strong enough to shake at the beginning of the first flow from alfalfa you can do so; but if I wanted to increase my colonies I would not make the second drive, but would leave enough bees to take care of the brood and remove the old colony to its permanent place and give a queen or ripe cell, and it will be ready for the fall flow, and depend on the swarm for your surplus from alfalfa. *Never shake until your bees are strong* and there is honey coming in.
J. T. HAIRSTON.

Cherokee Nation, Ind. Ter.

Press for Forming Sections.

I enclose a sketch of section-press that I invented and used for the last two seasons. It does the work fast and easy. A lever raised by a spring folds the section, place in press; pull down the lever and the section is pressed nicely together and is square.

The small pieces in the corners (xx) are pieces of a section-box; they are there so the section will be pressed a little more than square (they will spring back square).

On the side of the press have a board that covers the opening so the section will be placed in opening square and even.

I don't think any more explanation is necessary; if so, will be glad to answer any question you may ask.
I. C. BACHTEL.

Modoc Co., Cal.

[This section-press will no doubt make good work, as it is practically the same as one in use for a long time, although later presses have largely taken its place. Section-presses are furnished ready-made at such moderate prices that one could hardly afford to make one of these for his own use, especially as this can hardly be called an improvement.—ED.]

Cleaning Partly-Filled Sections.

Allow me to say a word or two about cleaning partly filled sections, as I notice Miss Wilson has some trouble in having them cleaned out by the bees (page 41). I have no trouble and have now on hand some four or five hundred, which I use in the spring on such hives as I find in need. The Bevins method, in theory, may be all right but is not practical for several reasons:

1. If the colony is a little weak (and those are the ones that need feeding) it allows too much cold air to circulate through the body of the colony and chills them.

2. It does not separate them sufficiently but what they can get at it at any time. But if you will take a thin board, mortise a hole at one end ½ by 3 or 4 inches, and place it on the hive, then a super on that, set the sections in promiscuously, and uncap and deface the honey enough to set it running, I am inclined to think you will have no further trouble in having your desires accomplished. The board should be thin, ¼ or ⅜, placing the mortise in the front to avoid draught.

I had the same trouble mentioned with cloth, but since using the above method I succeed every time. Should there be a failure where the honey is capped, deface it with a chisel or other implement you have in use. I use a one-inch firmer chisel, which I find to be the handiest tool for all-round purposes that I can find. A smoker, chisel, goose-wing and an old-style case-knife and you can have all the balance of the whole paraphernalia in the bee-kingdom. Try the goose-wing for a brush and see if it does not surpass any brush mentioned in the supply catalog.
A. Y. BALDWIN.

DeKalb Co., Ill.

Worcester Co., Mass., Convention.

The annual meeting of the Worcester (Mass.) County Bee-Keepers' Association was held Saturday, Jan. 24, 1903. The following officers were elected:

President, Charles E. Prouty; first vice-president, Horace P. Jacobs; second vice-president, Norman B. Parsons; secretary and treasury, Charles R. Russell.

Plans were made for some very interesting meetings during the spring. Speakers from outside, papers from our own members (including ladies), a banquet, outings to surrounding apiaries during the summer; in fact, a whole season of enjoyment is before us.

At the meeting of Jan. 24 Mr. S. A. Burgess related a very pleasing incident. He has lived in one house all or nearly all of his life. More than fifty years ago a hive of bees was placed in a small attic room; as soon as the hive was full the bees made comb on the outside, and gradually spread out until the walls and ceiling are nearly covered, and for more than fifty years the bees have been allowed to use that room. The writer has never been there, but he hopes to go before long and will be able to give a complete description.

Another one of the older members, Mr. S. B. Parsons, is very enthusiastic on the subject of bee-stings as a cure for rheumatism. He has no relish for the story told by Dr. Mackie of a man who was so firm in the clutches of that disease he could not walk; he was taken to an apiary and wheeled in a barrow to the side of an unusually cross colony. The hive was kicked over and the sick man jumped up and ran, cured of his trouble!

Later I will tell more of our association, number of members and other matters pertaining to bee-keeping in this vicinity.
C. R. RUSSELL.

Worcester Co., Mass.

Observations on Queen-Rearing.

I see by Mr. Alley's last article he disdains to refer to my $25 proposition, and well he may, as he would surely lose if he were to send me five queens reared from worker-eggs in nuclei.

I am also able (after reading Mr. Alley's article) to pick out conclusive evidence enough in that article to condemn his entire method of rearing queens. In that article he speaks of a very populous nucleus that after having their queen taken away refused to accept a virgin queen, and that this same small nucleus reared a batch of queens from their own brood, among which was one that was worth $100, and that the others were not good enough for breeders.

Now, I want to ask Mr. Alley: Did you ever think that that small colony was so crowded that the queen you took away had deposited an egg in a cell-cup, and that the colony would have swarmed in a few days anyway, and that $100 queen was a natural queen, and all the rest were only queens from worker-cells?

Another thing I want to state for the benefit of the uninitiated, and that is, look out for any queen breeder who has a $100 queen, as his system of rearing queens must be seriously wrong, or he would have more good queens, and as a

(Continued on page 139.)

ESTABLISHT IN 1861

AMERICAN BEE JOURNAL

THE OLDEST BEE-PAPER IN AMERICA

43d YEAR. CHICAGO, ILL., FEB. 26, 1903. No. 9.

❊ Editorial. ❊

Honey North and South.—There is always a possibility that two persons looking from different standpoints will see the same thing in different lights. The following letter illustrates this:

> EDITOR AMERICAN BEE JOURNAL.—
>
> Commenting upon Editor Hill's paragraph as quoted on page 51, I wish to say that, in the minds of some, there is some doubt that the South puts upon the market a larger percent of *low-grade* honey than any other section of the country.
>
> Again, "The unprogressiveness of many sections of *the South* is well known." (Is this unprogressiveness confined to *the South?*) "The product of the bee-keeping element in such localities is necessarily inferior." Why so? Does man's laziness or ignorance have any effect upon the bee? Is it necessary that the bee-keeper be of the general type?
>
> Escambia Co., Fla. C. C. PARSONS.

Editor Hill, himself a Southerner, and, indeed, a fellow-Floridan with Mr. Parsons, is pleading for justice to the South, and, no doubt, both men are of the progressive type, and if all men of the South had been just like them, it is likely that there never would have been any occasion for Mr. Hill to make his plea.

There is unprogressiveness in the North as well as the South, but whatever may be said as to the proportion of each, the fact remains that when honey has been put on the market as Southern honey, it has been quoted at a lower rate *because* it was Southern honey. No doubt, the nectar collected by the bee of the most up-to-date bee-keeper is not a whit better than that collected by a bee belonging to the ignorant and shiftless, but when that product is ready for the market there may be a distinct difference in appearance, and also in real value. One sample may be thoroughly ripened and luscious, while the other is thin, watery, and unpleasant to the taste. There may also be a marked difference in two samples of comb honey, both gathered from the same honey-plant.

Something has given ground for the belief that Southern honey, in general, is more or less inferior. It is unfair to Mr. Parsons to say that his honey should bring any less in the market than another sample exactly like it produced farther north. This injustice should not continue. If he can make it appear that it was all a mistake to suppose that any considerable quantity of honey produced in the South was inferior, he may in time change the significance of the term "Southern honey." But that would take a good deal of time, and possibly no amount of time would make the effort successful. Possibly he will find it a shorter task to take the ground that justice requires that his honey should stand on its own merits for what it is, without having any classification that shall arouse prejudice against it.

Duty on Honey to Canada.—In the report of the Ontario convention, on page 39, reference is made to the fact that Cuban honey is shipped to Toronto. It would, perhaps, more clearly represent the market if it had been said that there is a specific duty of 3 cents per pound on all honey going into Canada. Mr. Holtermann has called attention to the fact that he mentioned this duty particularly to the convention in this connection. So writes Mr. Morley Pettit, who reported the Ontario convention for the American Bee Journal.

The Texas Experiment Station Report has been received. It is a neatly printed pamphlet of 53 pages, six of which are occupied by the report proper, and 39 by an elementary treatise on bee-keeping for farmers and others desiring to keep a few bees. Prof. Fred W. Mally is professor of Entomology at the Agricultural and Mechanical College, assisted by Wilmon Newell, the latter having immediate charge of the apiary, and apparently the laboring oar in the preparation of the Report.

The Experimental Apiary was established in 1902, with seven colonies of bees, which were increased during the season to 21. The sum of $500 was voted by the Legislature for use in the year, and was invested in bees, queens, hives, books, honey-house, etc.

The effort has been to breed to the highest standard of excellence, keeping careful record of all colonies, and selecting the best as mothers of queens and drones.

It is proposed during the coming year to make a comparative study of the different strains or races of bees, and especially to determine approximately the comparative length of life of the different races. This is believed to have an important bearing upon the harvest in seasons of special drouth.

The study of honey-plants will also be continued. It seems a little curious to note that while American varieties of buckwheat are set down as partial or total failures, Japanese buckwheat gave the best results of all plants tested. The report says:

> With medium or even poor soil, and a very small amount of moisture, this plant can be depended upon to begin blooming 30 days after planting, and will continue to bloom for 30 days, at the end of which time the seed is ready to gather. It will be seen that it is a very easy matter to regulate the time of sowing, so that a honey-flow will be had from this plant at the beginning of a dearth of natural forage for the bees.
>
> Japanese buckwheat thrives best when drilled in rows about three feet apart, and cultivated during growth. The seed brings from $1.00 to 1.50 per bushel. In case seed is not desired the buckwheat can be cut and cured as in other hay, and is found to make valuable feed for farm animals. If grown more extensively there is no doubt that such hay would bring a good price in the open markets.

The cowpea, especially the speckled variety, is commended.

In the treatise on bee-keeping, in a list of eight reliable text-books adapted to the beginner, Maeterlinck's "Life of the Bee" stands next to the highest, and Doolittle's "Queen-Rearing" last. Otherwise the infortion is reliable, and calculated to be of good service to the class for whom it is intended.

Age of Brood-Combs.—In this country it has long been held that so long as worker-comb is in good condition there is no need to renew it in the brood-nest, and in Europe this view has also gained ground. In England, however, a different view is held. A late number of the British Bee Journal advises that brood-combs be gradually renewed, two or three each year, but not more than three in a single season. That means that in somewhere from three to six years, age alone incapacitates a comb for further service. The question is whether it is the climate of England, or what it is, that throws a comb out of service in so few years when there have been so many proofs that elsewhere a comb 20 years old is as good as new—in some respects better.

Honey in Bait-Sections, in the practice of most bee-keepers, is never allowed, the honey being scrupulously cleaned out of the combs by the bees in the fall before it has time to granulate. Some, however, have no fear as to ill results from having a little honey left over in the sections to be used as baits. Bearing upon the subject is the following in the British Bee Journal, from H. S. Shorthouse:

> The occasional crystallization of one jar of honey which granulates, while the others remain bright and liquid, is accounted for by the fact that the bottle either contains a small portion of grit, or is slightly rough or irregular in some particular part of the inside, which lends a starting point of crystallization to the sugars which are contained in the honey in what we will term a state of supersaturation.
>
> An experiment (on crystallization), using sulphate of soda for the purpose, most beautifully illustrates this theory. If we take a quantity of sulphate of soda, dissolve it in a minimum quantity of hot water, and whilst warm tie over the neck of the vessel in

which it is contained a parchment paper and allow it too cool, we can at any moment cause the solution to crystallize by the puncturing of the paper with a needle, or by keeping the bottle air-tight we can retain it in solution form.

Again, we can make solutions of chemicals, and can manipulate them without any signs of separation, but the introduction of a further small crystal of the same, or some other substance, will spontaneously cause the crystallization of the whole, and I feel assured that the granulation of honey can be accelerated by the addition of a very small crystal of the ordinary cane-sugar.

Weekly Budget.

Prof. A. J. Cook, of Los Angeles Co., Calif., writing us Feb. 16, reported "prospects for a honey crop in California good. Splendid rains."

◆

Mr. Thomas G. Newman, of San Francisco, Calif., has been very ill. So it is reported in his Philosophical Journal of Feb. 14. It says he was stricken Feb. 5, which was the 49th anniversary of his wedding day, and adds:

> He has been fighting a battle-royal for more than three weeks with la grippe in one of its worst forms. For eleven nights unable to rest or sleep, and yet each day taking up the work in all its trying, taxing details which is necessary to the editing and publishing of the paper and general work of the book concern connected with it.
>
> Their friends, who have observed the vast amount of work which was being done by both Mr. and Mrs. Newman, and have seen how weary they were growing, are not so much surprised that at last one of them has fallen at his task, and with the harness on.
>
> On Thursday, in going to the post-office, Mr. Newman suddenly lost consciousness and fell to the pavement, receiving what proved to be but a slight scalp wound. He was carried to a drug-store near by, and fortunately regained consciousness sufficient to give information regarding himself. He is now in a critical condition, and complete rest is the surest and almost the only means of assuring his restoration even to where he may take up the work he has been compelled to drop.

Mr. Newman's host of bee-keeping friends will read the foregoing with much regret; and all will unite in the hope that he may be spared, and that his recovery may be entire as well as speedy.

◆

The California Association.—We have received the following from Pres. Geo. W. Brodbeck, of the California National Honey-Producers' Association:

> Mr. Editor:—I herewith send you a copy of our by-laws defining the purposes of our organization. You will notice that it is a corporation, nevertheless it is a co-operative proposition, controlled entirely by bee-keepers. The requirements are such that it need exclude no one.
>
> Yes, it is evident we have a big contract on hand, but judging by the display of interest up to date by the receipt of communications asking for information from all sections of the State, the subscriptions for stock that are coming in daily from both large and small producers, the requests that are coming in from all localities for some one to come and organize local associations, all go to prove that never before in the history of California bee-keeping has this fraternity displayed such interest in helping along a project as they are doing with this one. We purpose in getting a live, wide-awake manager, that will keep in touch with every stockholder, be he large or small, making no distinction, working only for the good of the whole.
>
> Geo. W. Brodbeck.

The By-Laws referred to by Pres. Brodbeck, are these:

BY-LAWS OF THE CALIFORNIA NATIONAL HONEY-PRODUCERS' ASSOCIATION.

The name of the corporation shall be the California National Honey-Producers' Association.

Article I.

Corporate Powers.—The corporate powers of this corporation shall be vested in a board of five directors, who shall be stockholders, holding three hundred or more shares of stock in their own names on the books of the company, and three shall constitute a quorum for the transaction of business.

Article II.

Election of Directors.—The directors shall be elected by ballot, at the annual meeting of the stockholders, to serve one year and until their successors are elected. Their term of office shall begin immediately after election.

Article III.

Vcancies.—Vacancies in the board of directors shall be filled by the other directors in office; and such person shall hold office until the first meeting of the stockholders thereafter.

Article IV.

Power of Directors.—The directors shall have power:

1st. To call special meetings of the stockholders when they deem it necessary. And they shall call a meeting at any time upon the written request of the stockholders holding one-third of all the subscribed stock.

2d. To appoint and remove at pleasure all officers, agents and employes of the corporation, fix their compensation, and require of them security for faithful service, when it shall be deemed advisable.

3d. To conduct, manage and control the affairs and business of the corporation, and to make rules and regulations, not inconsistent with the laws of the State of California, or the by-laws of the corporation.

4th. To incur indebtedness. The terms and amount shall be entered on the minutes of the board, and the note or obligation given for the same, signed officially by the president and secretary, shall be binding on the corporation.

Article V.

Duties of Directors.—To cause to be kept a complete record of all their minutes and acts, and of the proceedings of the stockholders, and present a statement at the regular annual meetings of the stockholders, showing in detail the assets and liabilities of the corporation, and generally the condition of its affairs.

2d. To declare dividends out of the surplus profits, when such profits shall, in the opinion of the directors, warrant the same.

3d. To supervise all officers and agents and see that their duties are properly performed. To cause to be issued to the stockholders, in proportion to their several interests, certificates of stock.

Article VI.

Officers.—The officers shall be president, vice-president, secretary and treasurer, which officers shall be elected by the board of directors.

Article VII.

President.—The directors at their first meeting shall elect one of their number as president.

1st. The president, or in his absence the vice-president, shall preside over all meetings of stockholders and directors and shall have the casting vote.

2d. He shall sign all certificates of stock and all other official documents and shall draw checks on the treasurer, and shall perform such other duties as may be necessary for the good of the corporation a consistent with his office.

Article VIII.

Secretary.—The board of directors shall elect a secretary.

1st. It shall be the duty of the secretary to keep a record of the proceedings of the board of directors and of the stockholders.

2d. He shall countersign all checks drawn upon the treasurer, and discharge such other duties as pertain to his office and are prescribed by the board of directors.

3d. The secretary shall serve all notices required either by law or the by-laws of the association.

Article IX.

Treasurer.—The treasurer shall receive and keep all the funds of the association in a bank and pay them out only on the check of the president, countersigned by the secretary.

2d. At each annual meeting of the stockholders he shall submit, for their information, a complete statement of his accounts for the past year. He shall discharge such other duties pertaining to his office as shall be prescribed by the directors.

Article X.

Superintendent.—A general superintendent shall be appointed by the directors and removable at their pleasure. It shall be his duty:

1st. To take charge of all property belonging to the company and to control and direct all business and labor, such as grading sealing, storing and shipping honey, and any other duties required of him the directors.

Article XI.

Compensation of Officers.—The officers shall receive such compensations as the directors shall from time to time determine upon.

Article XII.

Certificates of Stock.—Certificates of stock shall be of such form and device as the directors may direct; and each certificate shall be signed by the president and secretary, and express on its face its number, date of issuance, the number of shares for which, and the person to whom it is issued.

The certificate book shall contain a margin, on which shall be entered the number, date, number of shares, and name of the person expressed in the corresponding certificate.

Article XIII.

Transfer of Stock.—Shares of the association may be transferred at any time upon the sale of the bees which they represent, by the holders thereof, by endorsement on the certificate of stock. But no transfer shall be valid until the surrender of the certificate and the acknowledgment of such transfer on the books of the association.

2d. The receiver of the new certificate shall be required to sign the by-laws of the association. No transfer shall be valid if the holders are indebted to the association on any account whatever.

3d. No surrendered certificate shall be canceled by the secretary before a new one is issued in lieu thereof; and the secretary shall preserve the certificate so canceled as a voucher. If, however, a certificate shall be lost or destroyed, the directors may order a new certificate issued upon such guarantees by the parties claiming the same as they may deem satisfactory.

Article XIV.

Meetings.—The regular annual meeting of the stockholders shall be held on the first Wednesday in January of each year at 10 o'clock, in Los Angeles, at such place as the directors may provide, and each stockholder shall be notified by letter by the secretary at least two weeks before the time of meeting; provided that when such day shall fall on a legal holiday, then such meeting shall be held on the next business day at the same hour.

At such annual meeting directors shall be elected by ballot to serve for the ensuing year, and until their successors are elected. No meeting of the stockholders shall be competent to transact business unless a majority of stock is represented, except to adjourn until such time as may be deemed proper.

Special meetings of the stockholders may be called by the president whenever he may deem it expedient, and he shall call such special meeting when requested to do so by the holders of at least one-third of the subscribed stock of the association. Notice of special meetings shall be given in the same manner as provided for at regular meetings, or when the stockholders are all present and sign a written assent thereto on the record of such meeting.

The president and secretary of the association shall act as president and secretary of stockholders' meetings, unless the meeting shall decide otherwise.

Directors' Meetings.—Regular meetings of the directors shall be held immediately after the annual meeting of the stockholders, and also upon the first Monday in each month at 10 o'clock a. m., and notice of such monthly meeting is hereby dispensed with. A majority of the directors shall constitute a quorum for the transaction of business. In case of an equality of votes the president may have a second or deciding vote.

Special meetings may be called by the president by his sending a notice in writing to each director four days before the time of the meeting called. Said meeting may be dispensed with at the discretion of the board.

ARTICLE XV.

Elections.—At all corporate meetings each stockholder, either in person or by proxy, shall be entitled to as many vote as he owns shares of stock. Such proxy shall be in writing and filed with the secretary.

ARTICLE XVI.

Seal.—The association shall have a common seal consisting of a circle having on its circumference the words "California Honey-Producers' Association."

ARTICLE XVII.

Governing the Sale of Honey.—No stockholder shall sell his honey crop or any portion thereof for less than the prices set by the directors.

A commission shall be paid to the association to defray the expense of grading, sealing and other costs of marketing.

2d. Money shall be advanced on honey stored in the association warehouse by a stockholder upon his written request, and such honey shall be held as security until it is sold or the loan, with interest, paid in full. The association shall furnish money on such honey at the lowest rate of interest that it is able to secure. All honey upon which loans are made shall be insured, and all other honeys shall be insured upon arrival at the warehouse unless the superintendent shall be notified to the contrary by the owner.

3d. The directors shall not change the selling price oftener than once a month. Stockholders placing honey in the hands of the association may choose their own time for selling, and when a member places his honey for sale at the rate set for a certain month he shall receive his proportionate amount of all money received by the association on sales of honey belonging to individual members during said month, provided it shall be received and the superintendent notified that it is for sale not later than the tenth of the month. Honey put on sale later than the tenth of said month shall be placed in the next month's division.

If a member wishes to place his honey in the warehouse and hold it for a raise in price he shall be permitted to do so, and only the actual expense of grading, storage, etc., charged.

A member who has honey in the warehouse on sale may withdraw said honey upon fifteen days' written notice to the superintendent. Honey not on sale is always at the owner's disposal.

Honey belonging to the association must be placed on sale in the same manner as that belonging to an individual.

ARTICLE XVIII.

Withdrawal of Members.—A member may withdraw from the association at the annual stockholders' meeting by turning over his certificate of stock to the association, and he shall receive one-half of the price paid the association for said stock, and his proportion of all surplus money in the treasury, but honey produced during the year of membership must remain until sold.

ARTICLE XIX.

Amount of Stock.—No person shall buy less than one share of stock for each stand of bees owned by him, and he shall be required to give a written statement declaring how many stands of bees he owns at the time of his subscription for stock, and at each annual meeting of the stockholders. In case of an increase in bees of more than fifteen per cent that is not represented by a share of stock to the stand of bees the owner shall buy more stock in proportion to the increase.

Where there is a decrease of fifteen or more per cent and the owner has bought his limit of one share to the stand he shall return stock to the association in proportion to his loss in bees, for which the association shall pay him at the same rate as provided in Article XVIII.

The board of directors may offer stock for sale to the membership, aside from the initiatory stock, as the necessity of the association demands, but not to exceed ten shares to one colony of bees.

ARTICLE XX.

Amendments.—The by-laws may be altered or amended at any meeting of the stockholders by a majority of stock represented at such meeting.

ARTICLE XXI.

Fines.—Any member who at any time violates these by-laws or the conditions stated by them shall, after being duly notified and heard in his own defense, pay such fine as may be imposed upon him by the directors, not to exceed $200 for each offense.

Know All Men by These Presents:

That we, the undersigned, being the holders and owners of more than two-thirds of the subscribed stock of the California National Honey-Producers' Association, hereby assent to the foregoing by-laws and adopt the same as the by-laws of the said corporation. In witness whereof we have hereunto subscribed our names this 19th day of January, A. D. Nineteen Hundred and Three.

L. E. MERCER.
GEO. W. BRODBECK.
M. H. MENDLESON.
L. S. EMERSON.
GEO. L. EMERSON.

Know All Men by These Presents:

That we, the undersigned, directors and secretary of the corporation known as and called the California National Honey-Producers' Association, do hereby certify that the above and foregoing by-laws of said corporation were duly adopted as the by-laws of said corporation on the 19th day of January, A. D. Nineteen Hundred and Three, and that the same do now constitute the by-laws of said corporation.

L. E. MERCER,
GEO. W. BRODBECK,
M. H. MENDLESON,
L. S. EMERSON,
GEO. L. EMERSON,
Directors.

GEO. L. EMERSON,
Secretary of the Association.

All beedom will watch with deep interest the progress and work of the California bee-keepers. While they are not exactly leaders in the work of co-operative effort in the sale of honey, yet on account of the importance of their crop, and at this time the feeling after a better way on the part of honey-producers generally, whatever of success or failure may develop in the California organization will be specially noted. Surely, they have the heartiest wishes of all for the accomplishment of every worthy desire and object.

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THE STEADY SUBSCRIBER is thus honored by the Grocers' Criterion:

"How dear to my heart is the steady subscriber, who pays in advance at the birth of the year; who lays down his money and does it quite gladly, and casts round the office a halo of cheer. He never says 'Stop it, I can not afford it,' nor 'I'm getting more papers than now I can read,' but always says, 'Send it, the family likes it; in fact, we all think it a real household need.' How welcome he is when he steps in the sanctum, how he makes our hearts throb, how he makes our hearts dance. We outwardly thank him, we inwardly bless him, the steady subscriber who pays in advance."

Just the same in the Bee Journal office.

◆

MR. J. P. IVY is one of Arizona's successful bee-keeping sons. A friend of his sent us the following in connection with the pictures found on the first page:

For some years I have been quite deeply interested in bees as a pastime and recreation, but never was pleasure greater, and never was there a more delightful surprise, than the hospitality shown me by Mr. J. P. Ivy. I met him, introduced myself, and he invited me to spend a night at his home—a home of comfort and happiness. Had bee-keeping itself been no pleasure to me, this meeting and courtesy of beedom, so to speak, would amply have repaid me.

In my wanderings over the country (I live in Delaware), I have never seen so complete, simple, and practical a system of apiculture as that of Mr. Ivy. Its economy and neatness strike the observer. Among the foremost of the great bee-keepers of the West, Mr. Ivy has six large out-apiaries, and ships several car-loads of honey every season. In a business of this magnitude some mutual understanding and adjustment of freight-rates, etc., are all-important. He, side by side with other progressive men, has striven to make the honey-business a straight and settled business, with just profits and fair dealing, and to advance the science of bee-keeping as well as to make an honest, honorable living.

E. G. BRADFORD, JR.

◆

DR. GALLUP, THE BARON, BANANA HONEY.—That is rubbing it into Dr. Gallup. If I were in his place I certainly should gallop off after getting a roast like that.

However, I should suggest to Baron M. Lieawful to change his name to "Baron von Munchausen."

I have no doubt that it will be necessary for Baron M. Lieawful to provide himself with collar and chain for his queen, as she certainly would be a dangerous insect if she ever ran amuck.

Tell us something of banana honey: that's all we get here.

PORTO RICO.

If you get banana honey you likely know more about it than almost any one else who reads this journal. Suppose *you* tell us something about it.

Convention Proceedings.

Chicago-Northwestern Convention.

Report of the Chicago-Northwestern Bee-Keepers' Convention, held in Chicago, Dec. 3 and 4, 1902.

BY OUR OWN SHORTHAND REPORTER.

(Continued from page 118.)

Mr. Moore—I move that we proceed to discuss the questions appearing in the President's address seriatim.

The motion was seconded and carried.

LAWS ON BEE-DISEASES.

Pres. York—If Mr. France were here he could start us off on that.

Mr. Wilcox—At the first convention I ever attended that subject was up as the most prominent subject for discussion. Dr. Miller was present, and he was the only champion there was on the affirmative side of the question. It had been referred to a committee and laid over a year. One of the committee was Prof. Cook, and the other was Prof. McLain, and they reported that legislation for bee-keepers was inexpedient, and not advisable. And that seemed to be the sense of that meeting or convention, Dr. Miller alone standing out in favor of his theory that legislation for bee-keepers is desirable, and I believe he has something to say yet. How many times I have thought of it, since foul brood laws and pure food laws became enacted, and since our Association was formed to protect each other as far as possible from dishonesty. It seems to me a good thing. I don't know about legislation, or how we can bring it about, but I would like to see and hear much on that subject.

Pres. York—We would like to hear from Dr. Miller if he hasn't forgotten what he said 25 years ago.

Dr. Miller—I confess I did forget. When Mr. Wilcox spoke first I thought he had gotten the men mixed, but I do recollect now. There is this about it: There are States all about us that have felt the need of this very thing; they have secured the legislation, and they are better for it. I very much doubt if you can find a man in the State of Wisconsin—a bee-keeper—who thinks it was a bad thing to have the law. Perhaps there are some. How is that, Mr. Wilcox?

Mr. Wilcox—I have never found one who is against it. We are in favor of pure food laws, foul brood laws, and any other good laws that can be enacted.

Dr. Miller—Regarding foul brood, I never saw a case of it. I was once where it was, and I was foolish not to look at it. I don't know, but I hope I may never see it in my place. One of the investigators across the Ocean has told us that the bacilli alvei, the germ of the foul brood, is nothing more nor less than one of the common microbes—bacillus mesentericus vulgaris—that is pretty nearly everywhere. Once at our house we had trouble with bread that would get soft and stringy.

Mr. Moore—Mold?

Dr. Miller—Not dry, though; and that's made by the same thing that makes the foul brood.

Pres. York—Then your wife didn't make that bread? [Laughter.]

Dr. Miller—(I wish the president would keep his audience in order, and not interrupt me.) The only point I wish to make in that is, that there is more danger than we think of in foul brood. I have always felt, so long as there was none of it near me, I was entirely safe. I don't feel as safe as I did. Now, I would feel much less safe if I knew of foul brood within two miles, within ten miles of me. I don't know what day there may be a case of foul brood ten miles around me. For that one case I want to be provided in advance. I have no foul brood in my apiary, but I want the law so that if something of that kind does come I will feel safer than I am to-day, and you are all in the same boat that I am. You may not feel anxious about it, but you are not safe as long as there is no law to keep somebody from bringing foul brood next to you, on the next farm. No inspector to come around and look at it. You are paying for fire insurance, and some of you for life insurance, and you would think it was very bad if you let your policy lapse and have no fire insurance. Now, you need all the insurance you can get against foul brood. You need the laws, and right along with that comes closely connected this matter of Wisconsin. Any one of you can't do much about getting foul brood laws, but as an organization here together you can do something.

Pres. York—This is certainly very important, and if we are going to attempt to get a foul-brood law during the coming winter we must start soon. The State Legislature meets in January. I have suggested that this Association co-operate with the State Association. Mr. J. Q. Smith is the president, and Mr. Jas. A. Stone is the secretary. Mr. Stone lives near Springfield, and could have the matter in charge.

Mr. Moore—One thing that occurs to me. We don't exactly think that Illinois is a back number in laws. For the protection of women it stands, I think, in the front rank of all the States. If you will read some of the law books you will find that women are classed as idiots and insane persons, and in Illinois they are classed as the superior of man, and their property rights are accorded to the very highest degree, and there are many laws in Illinois that are up to the times. There is not a law on the statute books of Illinois about bee-keepers' interests. Not a single law. That alone shows you the great need of something being done. All around us, one State has a law on foul brood, another has a law against spraying of fruit-trees in blossom, but Illinois has no laws whatever except the general food law which has just been passed, the old food law which has been a dead letter. With this exception there is no law for the benefit of bee-keepers especially.

Pres. York—We would like to hear from Mr. Clarke on this. I know several times at my office he has spoken about doing something.

Mr. Clarke—I think it is a most important thing. Now there is absolutely no protection to a man who understands the business, because some party that may have bees with foul brood, if he is 10 or 20 miles away from him, still as a kindness to one of their friends he may ship in a foul-broody colony to a man whose bees haven't got it. If shipped within a mile or two, it is only a question of a short time until he will have it in his own apiary. Of course, where a man thoroughly understands it, and it is within a mile or two of him, he can practically get clear of it. If he lets it get developed thoroughly in one or two colonies, and does not know it is amongst them, directly a frost comes and cuts off the flowers, the bees are going to look around and do some robbing, and they are going to take the foul-broody colony. The odor is offensive. They have no more than a bottle of honey in the hives because bees won't lay in the cells filled up with foul brood, so when they go into winter quarters they will have very few bees to protect their honey, and the others will rob them out, and when you get robbing in 80 or 100 colonies it is going to spread in every colony. Though one colony taken into your apiary in the fall would not develop at once, but directly the queen begins to lay in the spring they are going to take them, as well as two or three, and distribute them in the three or five hundred hives, and that goes to develop foul brood so that the man who has 200 colonies, with foul brood within two miles, isn't safe. This man can at the present time ship them to some friend half a mile from you, and you have no recourse at all. You can't say, "Here, destroy that colony," for if he doesn't want to he can keep them and throw them open to your bees if he wants to. There is absolutely no protection to a man. Besides that, I think it is needed as a protection to the public. Now we know that the instinct of the bee is that when there is a super put on, or a box to remove the honey from the brood-chamber up, if opened down below where the honey can be started over the foul brood scale, they will move that honey up into the super and drop down. That honey is sold. Under these circumstances I think that the law is not only a protection for the bee-keepers, but the public as well.

Dr. Miller—How many are there here whose bees are now troubled with foul brood, have it either in their own apiaries or near by?

Pres. York—How many have it at the present time?

Six held up their hands.

Mr. Clarke—I may say this, that although you can get an idea of the number here practically up-to-date bee-keepers that will be at a convention, still how many bee-keepers are there that don't take any interest in these conventions? These are the men we want to get after. The men who come here want to keep up with the times. We have diseases amongst every live creature under the sun. These are the men that this law is aimed against. Not at the bee-keeper who is here. They come to the convention, they get all the information and are informed.

Dr. Miller—These five or six men that raised their hands are not the ones who need the foul-brood law. The rest of us are the ones that need that law and want to have it. If I had foul brood in my apiary to-day I wouldn't give much whether you had a law or not. I haven't got it, and don't want it, and want things in shape so that I can fight it off.

Mr. Wilcox—I don't want to say anything in favor of a foul-brood law particularly, but I do want to say something. We, in Wisconsin, have one. Our State Association made the start. It is satisfactory to us. We hardly see how we can improve it except that we want two or three hundred dollars a year more to pay our foul-brood inspector. With that exception we think we are satisfied. I think I can speak the sentiment of every bee-keeper in Wisconsin when I say that we almost demand of you that you proceed to get the foul-brood law enacted in Illinois, and attempt to suppress the disease in this State so that it may not be transported continually into ours. We are continually in danger in buying queens or honey from your State, and if you go before your Legislature with a committee and Bill drafted to suit you, you will have no difficulty in getting it enacted. We had no difficulty when they saw that we were in earnest, and knew what we wanted, and how we wanted it, and you can do the same. I believe you can, and I know that you will be fortunate if you get as good an inspector as we did; but you need two of them, for your State is large enough to need it, and you will be completely successful in getting the disease so under subjection that it will not be spread. You will cure every case almost as quickly as it shows in any locality, and you will be proud to think that you have done it.

Mr. Kluck—If the bee-keepers of Illinois can only get a foul-brood law by coming together here and at other places this winter, it will be the end of their troubles. It is the men that keep bees that expect to get a crop next year who think it is a whole lot like finding money. They are the ones that do the most harm. If they have foul brood they say, "Well, bee-keeping doesn't pay very well; I will let that go. If the bees live they will live, and if they don't they will die." If we had a foul-brood law we could send the inspector there; he would condemn the apiary, and the man would either have to clean it up or destroy it. The most danger that we have from foul brood is from this man who keeps bees in anything from a nail-keg up to a dry-goods box, and they are in such shape that you can't do anything with them but destroy them. They are like a man that has horses that have distemper. After his horses have it he doesn't care whose get it. If we can only get a foul-brood law, and go before the Legislature and see our representatives in our different districts and tell them, "Now, you be sure and vote for this foul-brood law," why, we would have accomplished a great deal for Illinois.

Mr. Thompson—I don't think, like Dr. Miller, that the five or six gentlemen here who have foul brood don't need the law. I haven't foul brood in my own apiary, but I discovered it about half a mile from me, and I think I am in need of a law as much as any man in Illinois. I have to watch very closely now so that it doesn't get in mine. I was fortunate in finding a man who was willing to destroy it, as far as I know. All foul brood that was discovered is now in ashes.

Mr. Wilcox—How can you prevent it getting in yours, if it is within half a mile of you?

Mr. Thompson—The State law will help.

Dr. Miller—I believe that this organization can do more than any other agency in the State towards securing a foul-brood law. I very much doubt whether any of you would dispute that. I believe that if the whole time of this convention from now until the final adjournment should be taken up in discussing this, and then action should be taken resulting in getting a foul-brood law, it would be time well spent. I am not advising that, but only to show the importance I think attaches to this subject.

(Continued next week.)

Please send us Names of Bee-Keepers who do not now get the American Bee Journal, and we will send them sample copies. Then you can very likely afterward get them subscriptions, for which work we offer valuable premiums in nearly every number of this journal. You can aid much by sending in the names and addresses when writing us on other matters.

Contributed Articles.

Bees and Pear-Blight—Some Information.

BY J. E. JOHNSON.

On page 77, Mr. Mitchell seems to doubt the truthfulness concerning my having 900 pear-trees free from blight, and prefers affidavits from disinterested neighbors. Now, my neighbors are all pretty much interested, but if he will write to the bank of Williamsfield, Ill., or C. C. Davis & Co., grain merchants, or the postmaster at the same place (enclosing a stamp for return postage), they will enlighten him.

I have also 900 other trees—peaches, apricots, Japan plums—and will plant more pears this year. I am, however, a very small orchardist compared with many others. W. S. Mounts, of this State, has 11,000 pear-trees, and is a successful grower, and bees spreading blight does not worry him much.

It is not my intention to misrepresent, or boast of my ability, but I have very carefully studied the success as well as failure of other growers, have also studied somewhat about chemical physiology and pathology, and have a microscope strong enough to reveal the blight bacteria and some other agents of the plant-life called bacteria or microbes, but it does not make them as large and plain as I should wish. For the benefit of some let me say that the bacteria family are vegetable organisms, and do not belong to the animal kingdom; their mode of propagation is by a process of budding, and they increase very rapidly only in the elements favorable to their propagation, and no blight could exist except as the result of a microbe; and if we care for our trees as Nature has intended, they will not become favorable to the propagation of said organism, hence they would be blight-proof.

I do not wonder that my article on page 77 was critcised, as I did not write it for publication. I'll tell you how it was. At the Chicago convention Dr. Miller asked me to write to him and explain certain things in which we were both interested. The article was extracts from that letter. The Doctor has been patiently answering so many of our questions, and helping us out of our many troubles that I think he has begun to rejoice in our tribulations, and as I did not have any particular trouble he thought he would hunt me up a little, so he sent it to the American Bee Journal for publication.

Well, criticism taken in moderate doses is very healthful, and I am thankful for it.

Now, from what investigations I've made, and from what experience I've had, and I might say from many other fool notions, I'll try and tell you my opinion of pear-blight.

The natural home of the pear is in temperate Europe and Asia. Pear-blight is a thing unknown except in America; bees are known nearly the world over. In central France a pear-tree that was over 600 years old was destroyed a few years ago by storm. It was known as the Queen Anne pear-tree. In the suburbs of Boston are French seedling pear-trees nearly 200 years old, free from blight. In Illinois are pear-trees from 60 to 80 years old bearing regular crops, and have never had blight; these are French seedlings, and have been neither fertilized nor cultivated.

Almost any pear-tree will grow rapidly in soil poor enough to starve an apple-tree to death. Their roots penetrate the earth deeper than any other fruit-tree, which shows plainly it reaches some element not abundant near the surface. And I claim that when a tree is heavily fertilized with nitrogenous manure the growth is forced unnaturally, and will cause too abundant a flow of sap to the buds or blossoms, or any part of its new growth, and that the super-abundant supply of sap becomes favorable to the propagation of the blight bacteria, which is one of the agents of fermentation, plainly distinguished by the odor. I think the blight bacteria can and does live in the air, especially when moist and warm. Natural warm air is always moist, and contains more water than cold air, and moist, warm weather is very well known to be very favorable to the spreading of blight, in my opinion, from two causes, viz.: First, by causing abundant sap in the tree; second, by being favorable to the blight-germ.

There are hosts of different kinds of disease-germs in the air we breathe, and in the water we drink, but they do not produce sickness unless some parts of our bodies are favorable for their lodgment, when they will propagate and cause sickness. Now, the air always contains water, and what we call pure water also contains air. A pear-tree, body and branch, contains both water and air. The air in the sap, or water of the tree, contains nearly 35 percent of oxygen which passes from the earth through the body, branch and leaves; also the air, not in the water of the sap, which contains only 20 percent of oxygen, which is inhaled by the leaves. Now, if the blight-bacteria live in the moist, warm air, and the tree itself contains air, the air contains water, and so does every live tree, what is to hinder it from entering any part of its new growth and propagating if the sap is favorable to its propagation? I believe there is a limit to the amount of sap any tree can carry, and when there is a super-abundance of sap, or an element of that sap, it becomes subject to the agents of fermentation, of which the blight-bacteria are members. Some varieties are either able to utilize more sap, and form into wood or fruit-growth, or are more careful in the selection from the elements of the earth, therefore more proof against the germ. Rapid growers are not always the most subject to blight, but any variety will blight if abundantly stimulated.

From what experience I have had, and from what investigations I have made, I am led to believe that although the blight-bacteria will live in the nectar of the blossoms, they will not bud and propagate there unless in rainy or moist weather, which would tend to prevent the bees from utilizing the nectar, or rains or heavy dews which would dilute the nectar, thereby rendering it subject to fermentation, and therefore the bees would be, to a certain extent, a means of prevention of blight by keeping the nectar from becoming soured or stale. It is a well-known fact that seasons that are dry, and the bees working on blossoms every day, are just the seasons when blight spreads very little; and seasons of rainy weather, when bees are hindered from working on blossoms, are the seasons when blight often does the most damage.

That bees are agents in destroying the means of their own existence is contrary to the laws of Nature, which are God's laws, and always correct.

In conclusion let me say, do not understand me to mean that a pear-tree must be starved to be healthy, but that it must not be stimulated. Analysis of the pear-fruit shows that generally it contains about one-third less nitrogen than the apple, and more than twice the amount of potash, three times the amount of lime, and nearly twice the amount of phosporic acid and sulphuric acid. Therefore, feed the tree the elements it uses when it bears heavily. All these elements are present in the soil, but the element used is what should be replaced. Abundance of nitrogen causes rank wood-growth. Phosphorous is a mineral, very essential to pear-trees. Potash is the backbone of all fruit-manures. The last two are abundant in wood ashes. Potash gives color and flavor to fruit, and makes trees productive. Nitrogen retards production.
Knox Co., Ill.

Suggestions to Writers—Queen-Rearing.

BY ARTHUR C. MILLER.

On page 55 is the conclusion of an article by Mr. Adrian Getaz, which has appealed to me in several ways. It is quite evident that some of the criticisms to which he has been subjected have hurt, and lest it should cause him more or less to cease his writing, I want to begin this article with a word of cheer to him, and to all others who are sincerely and *unselfishly* trying to advance the science of bee-culture to the end that it may become both a more pleasant pastime and a more profitable business.

He complains of being accused of dogmatism. Well, that is a trifle. There are two classes of persons prone to use that accusation against an author—those who are envious, and those who are prejudiced, and neither are worth considering. But the assertive, dogmatic style, while not conducive to popularity, serves a very useful purpose—it arouses *opposition*. This, when aroused in the mind of another enthusiast, is conducive to new investigations, deeper research, and live discussion. Ofttimes the dogmatic form is the only one that will arouse some persons, but, once aroused, their work and their writings are well worth all the censure, criticism and pain it took to get them.

Again, he complains of being taken to task for not embracing in a single article everything relating to a topic. Some people want a free text-book with every issue of the paper.

Yet, again, he writes of being tasked with not being up-to-date on biological matters. A recent remark of a biologist may console him and some of the rest of us: "The only way to be up-to-date in biology is to live in the 'to-morrow.'" Theories are like a clothes-horse—while the latter are to hang clothes on, the former are to hang experiments on. If they will support the experiments they are good, and we call them "laws;" if not, we cast them aside and make new ones.

Further along, Mr. Getaz remarks on some details of queen-rearing, and names "three imperious conditions." I think that if he will consider the following, and will carefully experiment thereon, he will revise those conditions:

The first and greatest essential—the one without which all else is useless—is a nurse-force of *young bees*. Furthermore the presence of old bees is a detriment. Size of nurse-force is a relative quantity.

The second essential is, eggs, or larvæ under three days from the egg.

And, third, the presence of *pollen*, and honey or syrup readily accessible to the nurses.

To explain: Young bees do all the nursing. Old bees, when present with them, sometimes help themselves to "pap" which should go to the development of larvæ. This is particularly so in inclement weather.

Size of nurse-force should be governed by three things—season of year, number of cells to be "grown," and hive-chamber, its shape and size. A nurse-force of a given size can care for more cells if they are grouped in the center of a chamber which the nurses nearly fill, than if strung out in a long row in a chamber which the nurses can only partly fill.

The second condition is well understood and acknowledged.

The third is all too often forgotten, at least the pollen part. To obviate any chance of scrimping of larval food, it is essential that pollen should be present in the queen-rearing colony; and whether honey is present or not, or whether or not nectar is being gathered, more uniform results are secured and danger is removed by keeping a supply of *syrup* in a feeder always accessible to the bees.

To prove the correctness of the foregoing, take a pint of young bees—those just preceding the age of field-work and younger; give them eggs or larvæ for two to four queens and the other conditions as stated, and fine queens will result. Also take a peck, more or less, of old bees—field-bees; give them any number of eggs or larvæ you choose, and all the other conditions, and not once in a thousand will the resulting queens be worth the bother of killing.
Providence Co., R. I.

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

Fastening Foundation in Sections.

Mr. Erdman, on page 108, tells how he controls the heat from the lamp while fastening foundation in sections with the Daisy fastener. I use the Daisy fastener, but have never had any trouble in controlling the heat, by turning the flame of the lamp up when I wanted it warmer, or down when I wanted it cooler.

Have any of the sisters had any of the trouble mentioned?

Bees Short of Stores—Feeding,

On account of sickness and lack of help I failed to prepare my bees for winter. Before I could attend to them some colonies died for want of food. I fed them the best granulated sugar, two parts sugar to one of water. I fed them in a glass fruit-jar with cloth tied over the top and inverted. They will carry down two quarts during the night; some I have fed six quarts. I am sick with la grippe, and unable to attend to them. I forgot to say that the last two times I fed them my daughter was sick, and the sugar was made into a good syrup, but not near the boiling point. Some that was left was all crystallized, and I am afraid it is that way in the hives. If so, is there danger of the bees starving? I know there is plenty in there if they can use it. Please let me know whether they are safe, or if there is anything I can have done, as I think of them all night long.

Cass Co., Mo., Feb. 3. LUCY M. WAGNER.

You say that your syrup crystallized, and you evidently fear that the trouble came from not boiling the syrup.

It is not at all likely that boiling syrup makes any difference. It would crystallize just as quick after boiling as before. The sugar is already cooked as thoroughly as it can be, all it needs is to be dissolved. All the boiling does to the sugar is to dissolve it. Cold water will do that, too.

The right thing to do is to feed early, and feed thin. That will give the bees a chance to evaporate and make the chemical changes necessary to prevent granulation.

If you use a Miller feeder you can put in the syrup, or you can put in the dry sugar, anywhere from one to 15 pounds. Then make a depression in the center and add a very little water at first. After that has soaked slowly through the sugar, so that the first that goes into the feeder will be sweet, you can add as much water as you want to—you need not bother to measure it. Of course, the amount of water used must be governed somewhat by the amount of sugar used. If you use only one pound of sugar, you would hardly fill the feeder full of water, but if 15 pounds is used you can put in as much water as will go in. When the bees have taken it up, put in more water, and so on until all the sugar is used up. This is an easy and nice way to feed.

A crock-and-plate feeder can be used also with sugar and water. But remember you can not feed thin feed late in the season, because too-thin feed is unwholesome for winter stores.

When late feeding must be done, use five parts sugar to two of water, and add one even teaspoonful of tartaric acid to 20 of sugar to prevent granulation. It is better to use the feed hot, for the reason that the bees will take it down faster.

If you have extracted honey you can make Scholz candy and feed them candy in place of syrup. In winter this will be very much better.

What you want to know is, What to do about it now. It is not likely that your syrup crystallized so badly but that your bees can at least use part of it. The first warm day it may be well to examine and see how the matter stands. Then supply what is lacking by giving them Scholz candy, or, as you are so far South, and it is getting so late in the season that it is likely your bees will have a flight every two or three days, you can give them thin syrup.

A New Stove-Blacking.

Instead of blacking the kitchen stove, to smut utensils, hands, and flat-irons, dissolve beeswax and gasoline and rub it over the stove when cold. The result is a very good imitation of blacking, and there is neither dust nor smut.—National Stockman and Farmer.

❊ The Afterthought. ❊

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, O.

OSMOSIS, UMBILICAL CORD, ETC.

And Osmosis wishes to exterminate the Umbilical Cord. First we know the Umbilical Cord will sail in to exterminate Osmosis; and, dreadful to see, they may Kilkenny-cat each other. Well, if Atavism sitting on the fence is left to us we'll manage to get along. Page 45.

FEEDING IN THE OPEN AIR.

The inverted can, resting on a square of thick cloth—and lots and lots of them—for feeding the whole apiary in the open air. Very simple; and yet it has not often been suggested before—if at all. A. F. Foote, page 45, finds it to work well. Chances to fail with it though, I surmise.

POROUS COVERING FOR HIVES.

Mr. Holtermann's style of putting the argument in favor of porous covering in outdoor wintering will sound unusual to some. May be all right just the same.

"If the change of air has to be accomplished by the entrance alone, the bees must exert themselves to create a draft, and this is not good."

Is it common, even when air inside gets pretty bad, for bees to fan in winter? I'm not positive, but incline to say it is not. Of course, they do not fan except when the cluster is broken up, at least to some extent—but perchance few of us know exactly how often that takes place. Page 54.

A COMB FOUNDATION SEPARATOR.

A foundation separator—to hold up part of the weight of the bees, and to make it impossible for them to elongate the adjacent cells. This is not for sections but for full depth combs. Defends their full space, and keeps them from being built with protuberances and hollows. This appears to be a good thing. Morley Pettit, page 54.

DIFFERENT BREEDS AND QUALITIES.

Mr. Getaz will probably admit that different breeds of cows give milk of different qualities and decidedly different richness; but I see he rigidly bars off anything of the kind in different breeds of nurse bees.

May be
If Mr. G. he
Was a ba-bee bee
He would more light see—

and cry for some of that Jersey Food instead of that old thin stuff. Page 55.

FRAME OF BROOD AND SHAKEN BEES.

J. T. Hairston reads his experience that a frame of brood does harm in a shaken swarm, and that they stay better without it. Rather strange—but genuine experience among bees will now and then be strange. As to their starting queen cells on it the first thing, I rather guess that's something more than merely local and exceptional. Frame can be taken out again after being in a week and serving its purpose to prevent absconding. Page 55.

NON-LEAKING SHIPPING CASES.

Queer that so obvious a device to prevent cases from leaking was not more talked of and used long ago. (Paraffin or wax melted and run around the corners.) With either plan in universal use the wholesale man would find some cases leaking. Which plan on the whole would conduce to the least leaking? On the one hand there's the didn't-see-'em cracks and holes, and the springing loose due to being mercilessly banged on the road, or due to poor nailing. On the other hand, there's the blunderer who spoils the tray in the first instance, and the examination blunderer, who takes out a section to look at and tears down the paper wall as he rams it recklessly back. But on the whole, I guess the paper trays have it. Among other merits they keep the wood from soaking until it looks badly, so the cases are nicer to use a second time. Pages 59 and 52.

DR. LAMBOTTE'S IDEAS ABOUT FOUL BROOD.

"Powerful weak"—is Dr. Lambotte's attempt to upset the established ideas about foul brood. Providing, that is, that Adrian Getaz, on page 62, gives us a fair idea of the argument. If the field was entirely clear, and nobody knew a thing about the cause of foul brood, he ought to make a more conclusive case for his explanation and bug before inviting the whole world to adopt his views.

HONEY ON TIRED EYELIDS.

How does that honey on the eyelids *operate* to rest the tired eye inside? Want to know, you know. If the parts surrounding the ball are fevered (quite likely they are in such a case) I can imagine that closing the pores of the skin might check the local fever, and that when the local fever was checked the eye would get well faster. When I was a boy and hands got desperately sore and crackled up in the autumn winds, plenty of honey rubbed on and stockings drawn over to keep from daubing the sheets would take the fever all out between bedtime and morning, and give the cracks a nice start toward healing. Page 67.

The Premiums offered this week are well worth working for. Look at them.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

Tartaric Acid in Syrup—A Correction.

On page 89, the statement is made that to prevent granulation of syrup an even teaspoonful of tartaric acid should be used for each 30 pounds of sugar. I don't know whether the fault was mine or the printer's, but that 30 should be 20. It is possible that the smaller quantity would do in some if not most cases, but the teaspoonful for every 20 pounds is surer. The better plan, however, is to feed so early and so thin that no acid is needed. C. C. MILLER.

Recipe for Making "Good" Candy.

Please give the recipe in full for making the "Good" candy for bees to winter on. I have extracted honey and sugar.

Answer as soon as possible. I have no text-book and cannot find any recipe. ONTARIO.

ANSWER.—Heat the extracted honey, being *very sure* not to burn it, and stir it into the sugar till it seems quick thick, and take it from the fire. Then pretend you're kneading bread dough, with sugar instead of flour. Have the dry sugar on your bake-board, put the sugar-dough on it, and knead all the sugar into it you can. Let it stand a day or two, and then knead some more sugar into it until it is quite stiff, unless it is already quite stiff. That's all there is of making the Scholz or Good candy.

You probably have little idea how much a text-book on bees would be worth to you.

Taking Bees Out—Best Extracting-Frames—Chunk Honey—Best Bees.

1. I have 14 colonies of bees in a cellar that I made in a bank. It is 6 feet square by 5 feet high, and an A-shape roof with an air-pipe in the center of the roof. I put the bees about a foot from the ground. The cellar is very dry. The bees seem quiet so far. What time do you think will be the best, in this climate, to take the bees out in the spring?

2. Will pure honey sour before candying, or afterward?

3. Which is the better frame for extracting, the shallow, or regular Langstroth frame?

4. Which is the most profitable to produce, chunk honey or extracted?

5. What strain of Italian bees do you consider the best? And to what kind of bees do you give the preference? IDAHO.

ANSWERS.—1. I don't know enough about the climate in Idaho to say. A good time is about the time red or soft maple is in bloom; but you may not have any trees of that kind in your neighborhood. When they can fly out frequently, say every three or four days, you will be safe to take them out.

2. Yes, it may if it is thin enough, or is in a place where it becomes thin enough.

3. A shallow frame is considered preferable, but many use the regular Langstroth frame so as to have only one kind of frame.

4. That depends largely upon your market. If there is a good market for chunk honey at a fair price, that is best; otherwise not.

5. Those that give the best results in storing, no matter what kind or color. The leather-colored Italians are perhaps as hopeful as any; but leather-colored Italians are by no means all alike.

Full Drawn Combs vs. Starters—Dummies.

1. I have been reading that full drawn combs are not the right thing to use, but to use starters. What would be the best thing to do with old combs that are in hives where the bees had died? Could not the cells be shaved off and just the base or foundation be left, and then let the bees have them just as you would foundation?

2. What are dummies made of, and how are they made?

I will give my experience with a swarm inside of a house. Last July (5) I went over to Perry to visit a friend of mine, and he had a swarm in the side of his house which had been in there for eight years. They had gone in at the corner of an upstairs window, and they had built combs up and down, and between one of the studdings of the outside of the house, and had then gone in between the upstairs floor and ceiling of one of the lower rooms. There were combs that were 10 feet long, I secured 100 pounds of white honey that was free from pollen and young larvæ. The queen was the largest I ever saw, she was a third larger than any in my apiary at home, cells that were like large peanuts. They were crossest bees I ever worked with, being a gray color. I took them out and put them in a new hive, and they stored enough to keep them this winter. I will report more about this swarm of bees the coming summer. IOWA.

ANSWERS.—1. Most bee-keepers would count old combs out of which bees had died as valuable stock, and would give them to bees to use over again. Better find out whether starters are better for *you* than are full combs before you decide to prefer the starters.

2. A dummy is made of wood, pine being the best wood for it. Make a board with a top-bar to it so that the whole thing shall be much the same as a frame filled out solid with wood. It may be an inch thick, but ⅜ inch in thickness will answer as well or better, depending upon where you mean to use it.

Bee-Sting Remedies.

Some bee-keepers may congratulate themselves for receiving slight pain when stung by a honey-bee, while others have to bear intense pain, as was my case last summer. In hiving a swarm I had the misfortune to receive a sting on the left ear. After a short time, about five minutes, I began to itch intensely, then my entire body broke out as though I were stung all over by the bees. What is a good preventive for a sting? I used spirits of ammonia, but to no effect. ILLINOIS.

ANSWER.—In the case mentioned, the best preventive would have been a bee-veil. If you mean the best remedy, there is none. Perhaps it might be better to say there are hundrds of them, for nearly every one will tell you of this or that remedy that has proved best. Possibly nothing is better than a local application of common mud or wet clay, of course, getting out the sting the first thing. When the whole body is affected in the way you mention some have found relief by a pack in a wet sheet. If you have not had many stings it is quite possible that after receiving a few more the system will become so habituated to it that there will not be any very bad results from a sting. In some cases, however, the results continue to be so bad that it is advisable to give up trying to work with bees.

Questions on Management.

1. Can I make a weak colony strong in the spring by taking a frame of hatching brood and adhering bees from a strong colony and adding it to the weak one?

2. Can old comb be wired? If not, can I use it in the extractor?

3. If bees are shaken on starters only, as suggested by many bee-men, would they not build too much drone-comb in the brood-nest?

4. If I can increase by taking a frame of brood, having a ripe queen-cell, from a strong colony in the spring, and put this in nucleus, should an empty comb take its place in the old hive?

5. A sheet of foundation is put in a hive between two combs; now, the bees will, in most cases, bulge the combs on either side of this sheet of foundation, instead of drawing it out. What is the remedy? KENTUCKY.

ANSWERS.—1. It will make it stronger—probably about 5,000 bees stronger, if it is a pretty full frame—but it depends upon how weak the colony is whether that will make it a strong one. As a general rule one frame of brood would not make a weak colony strong. But look out that you do not do not do more harm than good by taking brood from a strong colony to give to a weak one. The frame of brood will do more good in a strong colony than in a weak one, unless the strong one be very strong.

2. You cannot wire them, but you can use them in the extractor without wiring. Thousands of combs were used in extractors before wiring was known.

2. There is much danger of it. Some practice giving four or five frames with starters, and when these are about filled giving the balance of the frames filled full of foundation.

4. One frame of brood will do if you have bees enough with it. If you mean to take only the bees adhering to the one frame of brood, that would be a rather weak nucleus. Two frames of brood with adhering bees would be a good deal better.

5. If you put a sheet of foundation right in the middle of the brood-nest, with brood each side of it, there will be no bulging where the brood is. and perhaps none at the upper part if the honey is sealed there. If there is unsealed honey in the upper part, there is likely to be bulging there, and you can remedy the matter by slicing off the bulged part. You can also keep the frames of foundation at one side of the hive.

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Italianizing—Shaken Swarms—Stimulative Feeding—Transferring.

1. What time next season would it be best to Italianize my bees, to secure the most honey and pay me all around? They are blacks, and rather poor workers (in 8-frame hives).

2. In practicing shaken swarms, should the super be put on at once, or wait until the brood-chamber is nearly filled? In shaking bees off combs would the queen be injured? And would the remaining bees (say one-sixth) in the old hive, with brood, rear a good queen? Would you use starters or full sheets of foundation in this plan?

3. Would it pay to practice stimulating feeding next spring? When should I commence in this locality (Southern Iowa), and how much a day should I feed? This locality is poor for spring bloom, and bees are rather light.

4. I have some bees in a box-hive to transfer. Would you transfer in fruit-bloom or wait until about swarming-time, and use the forced-swarm method? IOWA.

ANSWERS.—1. A little difficult to say. So far as concerns getting in better stock, the sooner the change is made the better; but then the change is in danger of interfering somewhat with the progress of the colony. Besides it is easier to get good queens later, so it may be well not to make the change till the harvest is well under way.

2. Supers may be put on at once if an excluder is used; otherwise wait two or three days till the queen has a fair start at laying below. The queen is not likely to be injured by being shaken off the combs. I would not expect the very best queens reared in the hive with only a few bees, and a good deal of time would be lost if the start was made with a young larva. Full sheets of foundations may be given, or else four or five frames given with starters, and when these are filled give the balance with full sheets.

3. Unless you have a good deal of experience, you may do more harm than good with stimulative feeding, but if you want to try it better try it with part of your colonies and see how they compare with the others. Do not begin till bees fly every day, and then feed a pound or so every other evening.

4. Very likely it will be better to wait till swarming.

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Moving an Apiary a Short Distance.

I have two small apiaries located about forty rods apart. One apiary contains eight colonies. I moved them in a row, placing them about four inches apart, and packed them with chaff on all sides, excepting the front, which is south, and placed a board before the entrance of each hive. They seem to be doing well at this date.

The other apiary contains twenty-one colonies, and is packed in the same manner. In the spring I wish to move them to a new location, together, about midway between their present locations. What precautions should be taken in moving them, and when should it be done? OHIO.

ANSWER.—If it were not for the packing you could move them any time now. But it is better not to disturb the packing until later, so you might postpone the moving until time for spring flight. If you could move them just before their first flight it would be well. When a day comes with the temperature at 45 degrees or higher in the morning, and rising all the time, with a bright sun and not windy, you may be pretty sure of a good flight-day, and then will be a good time to move them. Shut the bees in the hives, handle the hives roughly in moving them, and when it gets warm enough for them to fly freely—say 50 degrees or more—pound on the hives well, and then open them. First, however, it will be a good plan to make everything on the old locations look as different as possible, so that they shall not look like home to the bees. It would be no harm also to put boards in front of the hive entrances.

◆

Forced Swarming.

I wrote to you about one year ago asking advice concerning a colony of bees that I had which I feared had foul brood. I want to report now that I found later that the disease was foul brood, and I found four other colonies with the disease, all of which I treated on the McEvoy plan in June. with entire success, at least I have not seen any symptoms of it since. I examined them carefully several times, and made a special examination when I fixed them for winter in October, and I believe they are cured.

Now, Doctor, I want to adopt the forced-swarm plan the coming summer; I do not want to increase. I have read what has been written lately in the bee-papers on this subject, and yet, when I think of doing the work on the plans suggested, there are a few questions that arise in my mind.

1. To have no increase I must make three drives, the second one in 21 days. Will the second and third drive be accepted by the new colony without quarreling? And if not, how shall I proceed to make them behave peaceably?

2. May there not be a new queen in the old hive, and laying some time before the third drive, or should I cut out the cells? OHIO.

ANSWERS.—1. The business is expected to be done at a time when bees are gathering and not at all inclined to be quarrelsome, so no precautions need be taken.

2. When you make a shaken swarm you are expected to shake the combs, and to shake them hard. That will destroy all advanced cells, at least all sealed cells, at the first drive. The same thing will occur at the second drive, leaving no chance for a laying queen at the third drive. If a virgin queen should be present, she can be left to the tender mercies of the bees.

Allow me to add that there is no law compelling you to make a third drive, and, between you and me, I don't believe I'd make any drive after the first. You can shake and brush off all the bees at the first drive, and then you're done with it so far as that colony is concerned. Then you can pile up the beeless brood on some weak colony, piling it up till you have four, five, or six stories of brood, an excluder preventing the queen from laying in the upper stories. Then when the brood has hatched out, you can take away the combs, or leave them to be filled with honey. If you are so unfortunate (?) as to have no weak colony, you could use a strong one.

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Catalog Free. Garden City, Kan.

FROM MANY FIELDS.

(Continued from page 130.)

consequence they would not be so rare or valued so highly.

Now, Mr. Alley, my queens are all good enough to breed from except one, and one that was reared from a worker-egg; and furthermore, with the exception of that one, there is not more than $10 difference between the best and the least among them, and I have some colonies that cover ten Hoffman frames this cool weather, and I am not afraid to bet on

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To parties sending us an order for Supplies amounting to $10.00 or more, at regular prices, we will make the following low rates on Journals: Gleanings in Bee Culture (semi-monthly) 50c; American Bee Journal (weekly) 70c. List of Agencies mailed on application.
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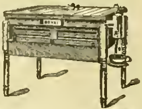

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Delicious fruit and lots of it, fresh from your own garden by following our new method of culture and getting our Home Garden assortment of plants. 36 plants will fill a bed 10 feet square and produce sufficient fruit for an ordinary family. Sent with directions for culture, for only 60c, charges prepaid. Ask for prices in quantity. Large illustrated seed & plant catalogue free if you mention this paper.
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Regulation dovetail with ⅞ Warp-Proof Cover and Bottom. Costs more, but sold at same price as regular.
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This foundation is made by a process that produces the superior of any. It is the cleanest and purest. It has the brightest color and sweetest odor. It is the most transparent, because it has the thinnest base. It is tough and clear as crystal, and gives more sheets to the pound than any other make.
Working wax into Foundation for Cash a Specialty. Beeswax always wanted at highest price.
Catalog giving FULL LINE OF SUPPLIES with prices and samples, FREE on application.
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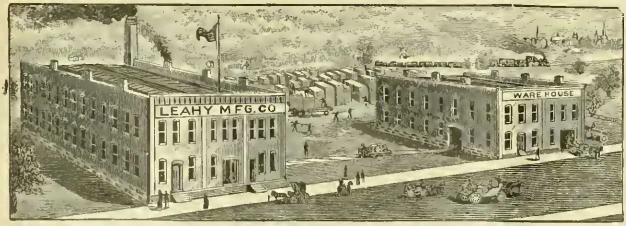

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HIVES, SMOKERS, EXTRACTORS, FOUNDATION
....AND ALL....
BEE-KEEPERS' SUPPLIES,
Address, LEAHY MFG. CO.
Higginsville, Mo. 1730 S. 13th Street, Omaha, Neb. 2415 Ernest Ave., Alta Sita, East St. Louis, Ill.

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it that you can't rear a queen from an egg taken from a worker cell that will have a colony that large at this time of the year.

In reply to "The Charge of Dr. Gallup," a bit of poetry on page 44—I wish to say that I do not condemn queen-saving or queen-selling, but I do say, and say it from experience, that I honestly believe that the only queens that are really of any value are those reared from eggs that the queen deposited in cell-cups, and that any queen reared from worker-eggs is worthless. Furthermore, if any queen-breeder wants to rear good, long-lived queens, just bring about the condition in a hive where the bees will start plenty of cells, and the queen will lay in them and save all the cells, and send out those queens to your customers and let me hear about it and I will probably want some myself, but I won't have them shipped with a few bees by mail, but with at least two Hoffman frames and bees by express.

In the last verse of said poetry above referred to, "big guns" are mentioned. Don't you know big guns are out of date, especially those black powder, smoky kind? We use only high-pressure smokeless powder and quick-firing guns on this coast. GEO. B. WHITCOMB.

Linn Co., Ore.

Bee-Keeping in Texas.

While bee-men in the north are wishing that their beehives were blocks of priceless coal, I am tempted to write a few lines to apprise you of conditions in central Texas, with special reference to the bees.

During the month of January we have had but three frosts; the days have for the most part been warm and sunny, and the lowest temperature recorded for the month was 24 degrees (that's *above* zero,

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you understand). To-day, Jan. 27, has been the warmest recorded, being 78 degrees in the shade. For the past week the bees have been out sunning themselves and incidentally getting into all kinds of mischief. There is little for them to gather at this time of the year, and nothing but a small boy can get into more mischief than an apiary of idle bees.

To-day I made a formal call on all of them. By the Carniolans I was received peaceably; by the Holy Lands with indifference, and by the Cyprians with many objections. However, all had sufficient stores, and were soon left to their own sweet will. A colony of pure blacks, which I captured in the woods last fall, and which are not yet thoroughly tamed, boiled out of the hive in confusion when the latter was opened, and the whole colony tried to get away, but ultimately returned, as good bees should. Have you ever noticed that you can domesticate a colony of "wild" bees by careful handling for a few weeks or months, so that they will not boil over and persist in getting where you don't want them?

And with all our blessings, we now have a honey flow! Not a large one, 'tis true, but nevertheless the bees are daily gathering pollen and a little nectar from both the Japan quince and from mignonnette, both of which are cultivated upon the college campus. And, by the way, that Japanese quince acts very much as if it would be valuable if cultivated for honey—not for a surplus crop, but for spring building—as it is perhaps the earliest bloomer of all native plants in central or eastern Texas.

We expect our honey flow to commence about March 1. Abundant rains have blessed all parts of Texas, which is an almost infallible indication of a good honey crop the spring following. Unless

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By planting seeds that bring *results* and reap dollars with the harvest. Our **Garden and Farm Manual** tells all about the best seeds that money can buy. Sent *free.*

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Cotalog Free. Round Rock, Tex.

ORCHARD STARTING

would be the **rage this** spring if people could see our nurseries. Of apple trees 3½ to six feet high, the showing is seldom approached, certainly nowhere this year. Every one **guaranteed** on whole roots, full of vigor and strength. No sign of disease.

SUPERIOR Apple Tree STOCK

Many thousand Trees, over a hundred varieties. These are but samples.

Summer.	Autumn.	Winter.
Summer Rambo, Red Astrachan, Red June, Yellow Transparent.	Gravenstein, Maiden's Blush, Duchess, Fall Rambo.	King, Jonathan, Wine Sap, Bellflower, Scott's Winter.

Every kind worth planting, all in pink of condition. Write at once for **Special Apple Tree List.** We pack as few nurserymen do. **Safe delivery guaranteed** to any part of U. S. Headquarters for Peach and Kieffer Pear Trees, Strawberry Plants, Asparagus Roots, etc. Catalogue mailed free. **Harrison's Nurseries, Box 59, Berlin, Md.**

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Root's Goods at Root's Factory Prices.

Complete stock for 1903 now on hand. Freight rates from Cincinnati are the lowest. Prompt service is what I practice. Satisfaction guaranteed. Langstroth Portico Hives and Standard Honey-Jars at lowest prices.

You will save money buying from me. Catalog mailed free. Send for same.

Book orders for Golden Italians, Red Clover and Carniolan Queens; for prices refer to my catalog.

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For Next 30 Days Only, we will mail our fine valuable Poultry Book FREE. Tells you all about poultry, how to make big money with poultry and eggs, contains colored plate of fowls in their natural colors. Send 10c for mailing and postage.
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when the hens lay. Keep them laying. For hatching and brooding use the best reasonable priced Incubators and Brooders — built upon honor, sold upon guarantee.

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$300,000,000.00 A YEAR and you may have part of it if you work for us. Uncle Sam's poultry product pays that sum. Send 10c for samples and particulars. We furnish capital to start you in business. **Draper Publishing Co., Chicago, Ill.**

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Tennessee Queens.

Daughters of Select Imported Italian, Select long-tongued (Moore's), and Select, Straight 5-band Queens. Bred 3¼ miles apart, and mated to select drones. No bees owned within 2½ miles; none impure within 3, and but few within 5 miles. No disease. 30 years' experience. WARRANTED QUEENS, 75 cents each; TESTED, $1 50 each. Discount on large orders.

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25c for our great Garden Seed Collection. 10 big packages finest vegetables. 25 varieties for 50c.
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Both 25c Colls. for 40c—both 50c Colls. for 75c.
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TOPEKA SUPPLY HOUSE,
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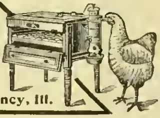
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We've improved the quality of the wire, and simplified the construction of wire fences. Move!
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Practical Apiarist Wanted for the season of 1903, or longer, to work with experienced manager of large apiary. State age, experience, references, wages expected, etc. Single man with ability to use carpenter's tools preferred. Address,
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144 E. Erie St., CHICAGO, ILL.

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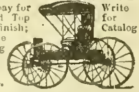
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$27,50 is all that you have to pay for one of our full-rigged Top Buggies. Oil tempered springs, fine finish; worth double the price. We make harness too. Write for Catalog and liberal agency plan.
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ECONOMY BUGGY CO.,
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If you want the Bee-Book
That covers the whole Apicultural Field more completely than any other published, send $1.20 to
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"Bee-Keeper's Guide."
Liberal Discounts to the Trade.

Please Mention Bee Journal when writing advertisers.

very unfavorable weather prevails during the honey season—as so many showers as to wash the nectar from the blooms—Texas will probably produce the coming spring one of the largest honey crops on record.

So, while you pass the "long winter evenings" (which to us are unknown), reflect that there is one place in the United States where the bees need no cellar, and the bee-keeper cares not one whit about the price of coal.

WILMON NEWELL.

Brazos Co., Tex., Jan. 27.

An Old Subscriber.

MR. EDITOR: Some weeks since I saw a communication in the AMERICAN BEE JOURNAL from one of your subscribers stating how long since he commenced taking the "Old Reliable." Well, I imagine that I rank among the oldest of your patrons, having been a regular subscriber to the first eight volumes (which I had bound in calf and still possess); also at irregular intervals ever since when I was at home and not engaged in business which prevented me from giving proper attention to my bees. I have never since 1872 kept more than ten colonies (generally less); just enough to supply my children and grandchildren with a little "sweet-tooth-filler" semi-occasionally. It is with unalloyed pleasure that frequently I take down those old volumes and re-read the articles by the fathers in (American) apiculture—Alley, Doolittle, Gallup, Grimes (deceased), A. I. Root, and a host of others whom my failing memory cannot recall.

I remember one subject of discussion which I have not seen mentioned for years, and which I fancy most of the modern bee-keepers take but little interest in, viz.: Parthenogenesis. However, I am intimately with some "tots" (embryo bee-keepers, possibly) who exhibit considerable familiarity with the Greek polysyllable, because, whenever they visit their grandsire, he organizes a spelling-class of eight members, to each of whom that succeeds in spelling "parthenogenesis" correctly he gives the choice of a bright new dime (a supply of which he keeps on hand for the purpose) or a section of honey.

Now lest some one of the younger generation should say "Will that garrulous old fellow ever cease his chatter?" I will simply say I am, Your most obedient,

KOMPOPHAKELLEREMON.

Carniolan-Italian Bees.

Some time ago I saw a request in the AMERICAN BEE JOURNAL for information about the Carniolan-Italian bees. In reply to that request and for the benefit of those who may desire to know something more of them I will say that I am now using those bees largely. That is to say, I have over 150 colonies and have had two years' experience with them. For me they are greatly superior to the

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That our line of Bee-Keepers' Supplies are some of the best goods in the world, and that our system of dealing with our trade is not excelled by anybody. Plenty of testimony from satisfied customers proves these things. Write and get our suggestions, our catalog and our discounts for winter-time orders—ALL FREE.
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2415 Ernest Ave., Alta Sita, East St. Louis, Ill.
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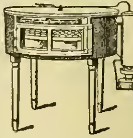
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IOWA ROUND INCUBATOR
R. C. Bauerminster, Norwood, Minn., got 493 chicks from 603 eggs. He followed directions, the machine did the work, because it was built on right principles and by good workmen. The IOWA has fiber-board case, does not shrink, swell, warp or crack. Regulation and ventilation perfect. Our free book gives more testimonials and full particulars. Everything about incubation free.
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GREAT CROPS OF STRAWBERRIES
And How to Grow Them.
The best book on strawberry growing ever written. It tells how to grow the biggest crops of big berries ever produced. The book is a treatise on **Plant Physiology**, and explains how to make plants bear **Big Berries and Lots of Them.** The only thoroughbred scientifically-grown **Strawberry Plants** to be had for spring planting. One of them is worth a dozen common scrub plants. They grow **BIG RED BERRIES,** The book is sent free to all readers of the American Bee Journal. Send your address to
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FREE SEED
Our handsome **Garden Annual** and **Seed Catalogue.** Send your address on a postal to-day, or for 4c. in stamps and the names of 3 neighbors who are actual seed buyers we will send our catalogue and **packet of the Giant Red, Madam Parrot PANSY** if you write before March 15th. Address,
COLE'S SEED STORE, Pella, Iowa.
5D4t Please mention the Bee Journal.

That Harrison Apple-Tree Sale.—An opportunity for starting an orchard or planting even a few select trees is now afforded fruit-growers which does not recur every spring. The great nurseries of Harrison & Sons, of Berlin, Md., have been for several seasons making a specialty of root-grafting, and growing of apples with intent to make wide sales in the spring of 1903, and by supplying a superior article in trees secure a vast spread of their trade in a single season. The object sought was to be obtained by supplying superior stock with no advance in price. From information we have through other sources than the proprietors, a view of the Harrison nurseries right now is a sight to gladden the eye. There are multiplied thousands of trees which, as was the design of the Company, are in the pink of condition for spring planting. Trees coming from this source are always in good health. This spring they are especially clean, smooth and vigorous. Everyone is upon a whole root-graft and the rooting is strong. It was a part of the plan to have every variety worthy of attention come in at the same time. Accordingly, over 100 varieties, Summer, Fall and Winter apples are ready to meet the requirements of growers. The trees are classed for sale and shipping purposes as 3½ to 5 ft., 4 to 6 ft., and 5 to 6 ft. As special care has been taken in the production of stock, so it is to be exercised as well in the packing to the end that every order shall reach the purchaser in the pink of condition. The Harrison people are guaranteeing absolutely safe delivery of this stock anywhere in the United States. Anything which from any cause arrives in poor condition is to be replaced. A special apple-tree list showing varieties, sizes, etc., has been prepared to send to inquirers about this stock. If you plant even a few trees this spring, don't fail to write for it. Please mention the American Bee Journal when writing.

Please mention Bee Journal when writing advertisers.

Italian and they far excel the Italian in every good trait save one—they do not stick to their combs as well. They are better comb-builders, and that means superior honey-gatherers. They are more healthy and winter to perfection under varying circumstances. They breed up quickly, and always stand ready for a honey-flow, short or long. As is characteristic of both races, they load very heavily and readily go over three miles from choice. I have had many opportunities to observe this fact, as there are none of these bees kept in this country except my own. I have found them at that distance by the thousands, and at a time when there was no scarcity of nectar, either.

They are superior for section honey, for the reason that they build the comb to the wood better and cap it smooth and white. They also build much faster, and are always stronger in bees than the Italians. The swarming propensity alone prevents them from becoming popular, though with me they have never given any trouble in that way. I am confident that the expert will find a way to work them; I have my own peculiar system and always produce great results with little or no swarming.

They mostly have the markings of Italians, though finer, and alternating with the white, silvery bands of the pure Carniolans. They are large and very gentle. The queens are dark, rather coarse, larger as a rule than Italians. Candidly, I believe them the best of bees for co honey in existence. After having used them for two years I am more than pleased and have decided to do away with my Italians. The latter have not the strong nursing power needed in this locality and linger along all spring before getting sufficient strength to do any gathering. The Carniolan-Italians, on the contrary, are storing when the Italians are only beginning to breed fairly. In the northern climate it may be different; I know that a much smaller force is needed there than with us. J. E. CHAMBERS.

Concho Co., Tex.

To make cows pay, use Sharples Cream Separators
Book Business Dairying & Cat.212 free. W.Chester,Pa

CONVENTION NOTICES.

New York.—The annual meeting of the Oswego County Bee-Keepers' Association will be held at Fulton, N. Y., Saturday, March 7, 1903. Prof. Frank Benton will be present and address the meeting. An interesting program is being prepared, and all persons interested in bees are cordially invited to be present.

MORTIMER STEVENS, Pres.
CHAS. B. ALLEN, Sec.

Ontario.—There will be a meeting of the bee-keepers of several counties, and any others, in the Court House at Brantford, Ont., Canada, March 3 and 4, beginning at 7 p.m. March 3. The question of stamping out foul-brood, and practical discussion as to the management of bees will take place. The Dominion and Provincial Governments, it is expected, will be represented, and from present interest a large turnout, even some from distant counties, likely. All welcome. R. F. HOLTERMANN.

New York.—A series of Bee-Keepers' Institutes will be held in the State of New York as follows: Canandaigua, March 2 and 3; Romulus, March 4; Auburn, March 5; Cortland, March 6; Fulton, March 7; Syracuse, March 9 and 10; and Amsterdam March 11.

Prof. Frank Benton, Apicultural Investigator, furnished by the United States Department of Agriculture at the expense of the Bureau of Institutes of the State Department of Agriculture, will address the meetings.

The New York State Association of Bee-Keepers' Societies will hold its annual meeting at Syracuse, March 10, at 10 o'clock a.m., in the City Hall. Prof. Benton and other prominent bee-men have informed us of their intention to attend this meeting, and a profitable and interesting session is in store for those who attend. Special rates have been secured for entertainment at the Manhattan Hotel, Fayette St., at $1.25 per day. C. B. HOWARD, Sec.

SWEET CLOVER

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We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

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White Clover	1.20	2.30	5.50	10.50
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Growing Strawberries.—"Great Crops of Strawberries and How to Grow Them," is a booklet, the advertisement of which has been running in the Bee Journal for some time. It is not a mere catalog but a concise treatise on Plant Physiology, and explains the best methods of developing the fruit-producing organism in the plant so that under the cultural methods prescribed, they double up on the crop of berries both in quality and quantity. It surely does explain how the fruit-producing parts of the plant exist, and how they can be developed, and gives the best modern methods of tillage. Fruit-growers greatly appreciate this work. It gives them a new light and enthusiasm in the work, and is surely working a revolution in strawberry-growing. You can get a copy of this booklet free by addressing R. M. Kellogg, Three Rivers, Mich., and at the same time mentioning the American Bee Journal. You will be delighted with it. Better write for it now.

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HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, Feb. 7.—The market is in rather an unsettled state. The offerings of late have been numerous, and there is a tendency towards lower prices, owing to the supply being much larger than expected at this season of the year. The fancy grades of white will sell at 15@16c per pound, but anything below this grade is difficult to place at anything above 10@12c. Extracted honey is also easy, with the best grades of white obtainable at 7@8c, and ambers at 6@7c. Beeswax steady at 30c upon arrival.

R. A. BURNETT & CO.

ALBANY, N. Y., Feb. 14.—Honey market is bare of stock here and white selling at 15c; mixed, 14@15c; dark, 13@14c. Extracted wanted at 7½@8c for white; 7½c for buckwheat or dark; buckwheat most in demand. Beeswax, 30c.

H. R. WRIGHT.

KANSAS CITY, Jan. 31.—The demand for honey has been very light; receipts fair. We quote as follows: Extra fancy, per case, 24 sections, $3.40; strictly No. 1, $3 30; No. 1 amber, $3.00@$3.25. Extracted, white, per pound, 7c; amber, 6@6½c. Beeswax, 30c. C. C. CLEMONS & CO.

CINCINNATI, Feb 7—The demand for all kinds of honey has fallen off considerably in the last few weeks, owing to the many other sweets offered at this season of the year. Lower prices are no inducement to increase the consumption, as the demand is not there, and will not be until about the end of the month; consequently it is folly to offer at lower prices. We quote amber extracted in barrels at 5¾@6½c; white clover and basswood, 8@9½c. Fancy white comb honey, 16@17c; lower grades hard to sell at any price. Beeswax firm at 30c.

THE FRED W. MUTH CO.

NEW YORK, Jan. 23.—Demand for comb honey quiet on all grades, and prices show a downward tendency. Supply quite sufficient to meet demand, if not more so. We quote fancy white at 15c; No. 1, at 14c; No. 2, at from 12@13c; dark and buckwheat, at from 11@12c.

Extracted also quiet with abundant supplies with the exception of white clover. We quote white at 7c; amber at 6½c, and dark at 6c. Common in barrels from 60@65c per gallon.

Beeswax firm at from 29@30c.

HILDRETH & SEGELKEN.

CINCINNATI, Feb. 7.—The comb honey market continues to be draggy and hardly any demand and therefore prices have weakened. Fancy white clover comb sells for 15@15½c; for amber there is no demand. The market for extracted is fair and prices rule as follows: Amber, 5¼@5½c, by the barrel; in cans it brings a little more; alfalfa, 7½c; white clover, 8@8½c. Beeswax, 28@30c. C. H. W. WEBER.

SAN FRANCISCO, Jan. 14.—White comb honey, 11½@12½c; light amber, 10@11c; dark, 5@6½c. Extracted, white, 6@6½c; light amber, 5@5¼c; amber, 4@4½c. Beeswax, good to choice, light, 26@27½c; strictly fancy light, 29@30c.

The country merchant, representative of trade interests, estimates "entire stock of honey of 1902 in the State at 15 cars," worth 5¾@6c per pound at primary points, subject to a $1.10 freight-rate to the East.

WANTED WHITE CLOVER EXTRACTED HONEY!
Send sample and best price delivered here; also Fancy Comb wanted in no-drip cases.
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2000 lbs. Basswood Extracted honey, at 9c a pound. All in 60-lb. cans. Warranted PURE HONEY. JOHN WAGNER, BUENA VISTA, ILL.
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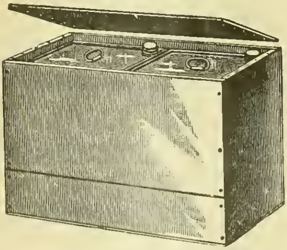

A sample by mail, 10c for package and postage. By freight, f.o.b. Chicago: 2 cans in box (120 lbs.) at 8 cents a pound. We can furnish Basswood Honey at ½c a pound more.

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N. B.—If you are not posted as to where you can buy Root's goods advantageously write us. Ask also for catalog of Bee-Keepers' Supplies and specimen copy of Gleanings.

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Spring Care of Bees.

C. P. DADANT.

Rearing Good Queen-Bees.

L. STACHELHAUSEN.

AMERICAN BEE JOURNAL

43d Year. CHICAGO, ILL., MARCH 5, 1903. No. 10.

WEEKLY

Courtesy Gleanings in Bee-Culture.

THE LATE JOHN H. MARTIN, "THE RAMBLER."
(See page 146.)

THE AMERICAN BEE JOURNAL

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GEORGE W. YORK.

DEPT. EDITORS,
DR. C. C. MILLER, E. E. HASTY, EMMA M. WILSON

IMPORTANT NOTICES.

The Subscription Price of this Journal is $1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

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Music by GEORGE W. YORK.

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144 & 146 Erie St., - CHICAGO, ILL.

Weekly Budget.

EDITOR E. R. ROOT is the son of his father as a hobbyist, although he does not ride a hobby with the reckless abandon of the elder Root. On account of his health he has gone back to the beef diet, confining his eating entirely to lean meat with the accompaniment of a small piece of dry toast. Along with this he is somewhat enthusiastic over a set form of muscular exercise under the name of "Physical Culture." Whether as a beef-eater or a gymnastic contortionist, or both, the hearty hope is indulged in this quarter that our good friend of the sprightly and able Gleanings may speedily be as strong as ever—and more, too.

JOHN H. MARTIN, the well-known apicultural writer, died at the age of 63 years, of pneumonia, in the hospital at Havana, Cuba, Jan. 13, 1903. Mr. Martin was perhaps first known as a writer in the American Bee Journal over the nom de plume of "Scientific;" and for the past 15 years, as "Rambler," he has contributed regularly to Gleanings a series of illustrated articles of special merit. A kindly, humorous spirit seemed always bubbling to the surface in his writings, and in his many rambles he seemed to make friends wherever he went. Indeed, in the most doleful plights, he always seemed to find a funny side.

Mr. Martin was a deacon of the Congregational Church, an earnest Christian, at one time president of the Christian Endeavor Society, and for many years superintendent of the Sunday-school. He left no family, his wife having died many years ago, leaving a shadow on his life that seemed never entirely lifted.

In closing a beautiful tribute to Mr. Martin's life, Editor Root had this to say:

> Perhaps no single writer who ever wrote for Gleanings ever called forth more praise from our subscribers than the Rambler. His serio-comic writings, filled as they were with valuable hints, and the exact portrayal of every locality through which he traveled, made him not merely a funny man, but a dignified correspondent, who could and did give us much of value through his writings. While Gleanings mourns his loss it mourns it no more than every subscriber who has followed him through these years; and when the news was flashed back from Cuba that the Rambler was dead, I felt as if a near and dear friend had passed away; and I never met any one who had come in contact with the Rambler who did not hold him in exactly the same high esteem.

The leaders in bee-keeping are fast passing away. During the past few months a number of them have gone, among them being Chas. Dadant and Dr. Mason; and now the Rambler has been called. They will all be missed here by the thousands who enjoyed their personal acquaintance and writings.

Dr. Miller's New Book

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The book contains 328 pages, is bound in handsome cloth, with gold letters and design; it is printed on best book-paper, and illustrated with over 100 beautiful original half-tone pictures, taken by Dr. Miller himself. It is unique in this regard.

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ESTABLISHT IN 1861
AMERICAN BEE JOURNAL
THE OLDEST BEE-PAPER IN AMERICA

43d YEAR. CHICAGO, ILL., MARCH 5, 1903. No. 10.

Editorial.

Aid from the National Government.—It is only the right thing that the general government should aid bee-keepers in the way of apicultural investigations to a much greater extent. There is at present some prospect of this. If you desire it, write at once to Hon. Redfield Proctor, United States Senate, Washington, D. C., and urge that in addition to the amount appropriated for the department of Entomology, an extra amount be appropriated for apicultural investigations. Mr. Proctor is Chairman of the Committee on Agriculture and Forestry.

◆

Snow and Sunshine is often a bad combination in spring for bees wintering outdoors. Especially is this the case when the snow is very soft. The bright sun entices the bees out, and the dazzling snow seems in some way to affect them so that they drop into it, sinking deeper with each struggle, and soon become so chilled that they never rise again. The beginner is warned to combat the effects of one or both. If the bees are not in much need of a cleansing flight, the easiest thing to do is to place before the entrance of each hive a board to prevent the sun from shining into the hive, unless it be very early or late in the day. If it is thought best that the bees should fly, then the snow should be swept up for a considerable distance about the hives, or else something like hay should be used to cover the snow.

◆

Swarming Prevention Better than Control.—Notwithstanding the great advantages of forced swarming over natural swarming, there can be no disputing the point raised by some that it is merely a matter of controlling swarming so as to have it come at the time when it suits the bee-keeper, leaving the entire prevention of swarming a desideratum. Among the many plans tried for prevention of swarming, that of Samuel Simmins attracted considerable attention at one time in this country, but for some reason not many made a success of it. The heart of the plan depended upon the fact, supposed or real, that so long as bees had room below the brood-nest, and were occupied building there, there could be no thought of swarming. Mr. Simmins believes that the reason for the failures in this country was that the plans recommended by him were not correctly carried out.

Room for building was to be given below the brood-nest, and as often as a fair start was made there the combs were to be cut out and moved above. In order to reduce to a minimum the labor of management, the Simmins' Conqueror hive was devised. This consists of an outer case in which the supers, as also the brood-chamber, are received like so many drawers in a bureau, there being room for a super beneath the brood-chamber, so that this lower super can be taken out and moved above without at all disturbing the brood-chamber. While this may be the most convenient hive for the purpose, there is nothing, as Mr. Simmins has pointed out, to prevent trying the plan with other hives.

Regarding the plan, and its comparison with forced swarming, Mr. Simmins writes in a private letter:

> But, after all, why swarm at all when under "Prevention" as opposed to "Control" without increase? My "Conqueror" hive allows of starters *below* the colony when required; or, better still, when arranged for comb honey, the super of sections is started (with full sheets in sections) *under* the colony; this super is placed *above the colony* when the bees are crowding into it, bees and all being placed between the colony and the other super of sections already above. The one moved up is followed by another under, and so on in rotation.
>
> "Thus, you are constantly getting the bees to continue comb-building below, and all the while deceiving them by carrying it above"—thus. by starting building below and finishing above, you take all the swarming fever out of them—you keep more powerful colonies, and secure higher results.
>
> I may say that only the "Conqueror" hive-construction will allow this easy shifting of supers. The principle has been adopted in more or less perfect form (mostly imperfect) by all British hive-makers since my system has been developed.
>
> I should indeed be glad to know that you also have made a success of it. The only thing is, *will you* get the hang of the *correct* construction and management? Many have not, hence failures. SAMUEL SIMMINS.

◆

Treatment of Foul Brood.—Much has been said about foul brood and its treatment, and there are probably some who have read little or nothing of the kind, thinking that it is a subject that does not concern them, their bees being entirely healthy. It would be very much better to read all that is written on the subject, even if one never expects to see a case of foul brood. Then one would be free from needless anxiety upon the appearance of some trouble in no way connected with foul brood, and in case of an attack would be ready for prompt action.

At the Ontario convention, as reported in the Canadian Bee Journal, that eminently practical man, Inspector McEvoy, gave the following, all of which will be useful reading for beginners, and part of it may be new to some of the veterans:

> For the treatment of it, the bees must be thoroughly cleansed of the old honey that they took from the old hive. There are times when you should shake them on to full sheets of foundation and make a cure, but it is too risky, for while you might cure nine-tenths of the bee-yard, if it worked out in the other one-tenth it would only go on and destroy all you had done.
>
> If it is in the honey season, shake the bees down on little starters, taking all the comb out. Shake them into the empty hive and give them half an inch of comb foundation starters, and do the work in the evening. If the flow should stop or slacken through rains or unsuitable weather, apply the feeders at once and start a flow in that way, and they will draw out these little pieces of foundation. If you allow the little they brought from the old comb to be stored in the new, that will cause trouble; take away, therefore, the built-out starters and give them sheets of foundation, and when this foundation is worked out it is forever gone in every case; this will cure every colony it is found in.
>
> It is one thing to cure the bees, but you may cure with a great loss, that is, you may destroy all the healthy brood, also. Leave about a quarter of the bees (after you shake them down) on one set of combs; take the combs from this, that and the other, enough to make two stories, and leave it about 10 or 12 days, and most of the brood will hatch out; after about 10 days in the honey season shake them down and put them through this treatment again, and give them a queen or queen-cell. In going through the bee-yard put a cross upon those hives; if one is very bad put three crosses; if middling, two, and soon.
>
> Don't do this work in the morning or middle of the day, because if you shake the bees out, and do it in the middle of the day, they will become restless, and some will swarm out and mix in with what you have already treated.
>
> After the honey season is passed, and you find a few have it, even if it is only a few cells, don't think that it will ever cure itself, because as long as a comb lasts it will remain. Those few that are there let alone, but take the others that are sound and feed them sugar syrup until you get a lot of nice sealed combs, feed them down till they are sealed solid. In an evening in October go to the diseased colonies, lift the combs out, shake the bees back and give them five or six combs of these sealed stores. The honey they took out of the infected combs they have to keep, as they have no place to put it; the queen has stopped laying, the cold weather is coming on, and it will be digested and taken out of the way. Just as good a cure as in June or July.
>
> Never attempt to cure any in fruit-bloom—it is too risky—because the weather might change suddenly, and the flow stop coming in, and you will meet with quite a lot of starving larvæ; they will consume the unsealed stores, and they won't uncap the stores they have quick enough to feed the amount of brood. It is not proper to do it then; wait until June.
>
> In these weak colonies you have two or three crosses on, take two or three—or whatever it may require to make a good swarm—cleanse that and cure it. These others that have plenty of fine brood, tier the brood up from the others, and you will make up what you lost; you will gain it in the new.

Convention Proceedings.

Chicago-Northwestern Convention.

Report of the Chicago-Northwestern Bee-Keepers' Convention, held in Chicago, Dec. 3 and 4, 1902.

BY OUR OWN SHORTHAND REPORTER.

(Continued from page 135.)

ILLINOIS LAW OF FOUL BROOD.

Pres. York—Do you wish to say anything further, or do you wish to take any action by motion? I think we have probably said enough about the necessity of this law, now what steps do you wish to take towards securing it? Do you wish to have a committee appointed?

Mr. Wilcox—I suppose it is not my business to interfere with the Legislature of Illinois.

Dr. Miller—You have the same right on that as any one. You can make a motion that a committee be appointed to co-operate with a committee that may be appointed by the State Association, to draft and prepare what is wanted.

It was moved and seconded that a committee of three be appointed to have in charge the securing, if possible, a foul-brood law for the State of Illinois, to co-operate with a similar committee from the State Association.

Mr. Swift—Wouldn't it be well to have that committee fortified by a preamble and resolution adopted by this convention in favor of such action? They would then have the fortification of the united action.

Pres. York—We might suggest that this committee prepare such a resolution.

Mr. Moore—I want to amend the motion by adding, "and also with the National Association to this end."

Pres. York—I think the mover of that motion will accept that.

Mr. Moore—I say the National specifically. I have been secretary for four years now of this Association, and there have been a multitude of motions made and carried, ordering the secretary and committees to do a great many things, but they have all fallen to the ground. I want this Association to understand that this thing will always follow unless they are carried out in the proper way. Go back when they got their foul-brood law in Wisconsin. If we want a foul-brood law here we have to do as they did and say, "Here, France, we want a foul-brood law in Illinois; here is $500 to pay your car-fare and hotel bills, and call on all the rest of us for what is necessary." Any mere motion passed, advising and ordering this committee to co-operate with any other Association without funds to carry it out, is as empty as a tin bucket, and I thought I would like to tell you that before you pass this resolution. There is only one way to do it. The National has now about 1000 members; one of the functions of the National is to aid States to get proper laws on their statute books. Why can't the States do that? Why can't the local associations do that? Simply because they can't raise the money. The National has 1000 members, and if this was done by the National, and properly drafted, having the 700,000 bee-keepers in the United States, and get them to put their money up, then there would be no reason why we couldn't get ten or twenty thousand dollars. You will never get a foul-brood law without some money, with one, two, or five hundred dollars, and the services of some man like Mr. France, that has all his time to devote to the Legislature, and a politician, to push it through.

The motion was seconded and carried.

Pres. York—Whom will you have on this committee? If you will name them we will elect them.

Mr. Wilcox—It would seem to me much better for the president to take time to inquire concerning them, and then make the appointment, and I will move that he be authorized to make the appointment of a committee of three, and not to be in haste to do it. Select those men most suitable.

The motion was seconded and carried.

Mr. Wilcox—I don't want to do all the talking, but I am thinking all the while with respect to the suggestion of Mr. Moore. I think it would be wise to offer a motion here that the surplus fund in the treasury of this Association be applied to defray the expenses of this committee, so far as they may be available.

Pres. York—Do you make that as a motion?

Mr. Wilcox—Yes. We found that difficulty in Wisconsin. Mr. France had to advance all the money, and then we had to make it up the best way we could.

Mr. Moore—I would like to ask for information. Under the present law of the National can money be taken out of their treasury to have laws made in the local States—different States?

Mr. Hutchinson—As I understand it, the funds of the National Association can be used for any purpose that the directors may decide. When we tried it in Michigan we had no doubt but that they would assist us in that way. It was necessary to go at it immediately, and Mr. Root, myself, and George E. Hilton, were in the effort two years, and Mr. Root and myself paid Mr. Hilton's fare, and he gave his time, and we paid his hotel bills and railroad fare, to get the law through at Lansing. The matter was laid before the National Association, hoping that they would help us out, but when it came to a vote they turned us down; but I have always thought, and still think, that that is a legitimate use for their money. Afterwards, the bee-keepers of Michigan partly made up the money to Mr. Root and myself; the rest of it we paid out of our own pockets. It is entirely useless to pass a resolution and send a committee unless you have money back of it. I am in favor of the National Association assisting the different States in getting proper legislation on that subject. Some of those who voted against it, said the reason why they did that was that they thought it was going to open the door for every other State to come in. Suppose it did? Why not? I can't see that as a valid objection.

Mr. France had just come into the room, and was then introduced.

Pres. York—Perhaps Mr. France can give us some advice as to how to proceed.

Mr. France—I haven't been here long enough to know the drift of the conversation that has been going on, or what your plans are, but I certainly know this much, and that is, that the State of Illinois needs laws on foul brood, and you want it from the next Legislature. I am getting samples of foul brood from Illinois frequently, asking for help, which I have gladly given. I think it wise for your legislative committee—don't make that committee too large. We lost our effort two years by making the committee of several. Usually when it gets down to business the committee consists of but very few.

Mr. Hutchinson—Mr. Moore and myself were making the point that there has to be some money spent.

Mr. Moore—The question arose of using the National Association's funds for this purpose.

Mr. France—How much has this convention's treasury to work on?

Pres. York—About $25.

Mr. France—How much has the State Association of Illinois?

Pres. York—Nothing.

Mr. France—Well, you are nearly in the condition that Wisconsin was in to start.

Mr. Moore—What does it cost? Suppose the Illinois Association would say to you, Mr. France, "You get a foul-brood law, and call on all of the members," how much cash would it take?

Pres. York—How much would *you* do it for? That's it. [Laughter.]

Mr. France—I don't believe it is as much the cash as every one's shoulder to the wheel. We first attempted it by raising a fund. We raised a fund, and then they said, "France, go ahead and get legislation." It was a drop in the bucket started in the right direction. One man in the Legislature has no influence. I was laughed at all over the Legislature, appealing for the interests of bee-keepers. It was too small a question. Some one even suggested that the next thing some one would want legislation to look after the flies, and, really, one man said they might even want some one to look after the bedbugs! Then I found that it was necessary that each individual bee-keeper see personally, or write, his representative in the Legislature, and have him vote for it, and the vote stood 93 to 2 in our favor. It wasn't money alone. I took $25 out of my own pocket, and I found one legislative committee before whom I appeared suggested the idea that it took money to run things through the Legislature. He slightly hinted that it might take money to buy our way through. I told him I was sorry, but I had no money, and I hadn't heard of a bee-keeper disgracing himself by putting his hand down into his pocket for any lobby money. We were there, and we got it.

Mr. Moore—How many bee-keepers have we in this State?

Pres. York—Several thousand.

Mr. Moore—Suppose we have 3000 bee-keepers, what would you do? What must we do to get in a large number of the 3000 bee-keepers to-day? That's the thing that's needful.

Mr. France—By the aid of the editors of the bee-papers I had to lay a plan, and I learned that I must have the names of the bee-keepers. They furnished me the names of the bee-keepers, then I corresponded with them. I sent out 600 letters, and received 180 replies. That was the first response.

Dr. Miller—Now you are talking business.

Mr. France—Then I sent out more, and by-and-by those became interested, and by-and-by I had letters by the basketful when the time came for the Legislature in our State. I think that will be the way you will accomplish it in this State.

Pres. York—We ought to get Mr. France to move over to Illinois for a while. We can employ him!

Mr. Niver—I was just asking Dr. Miller to give me a name here for one of those endless-chain affairs; each one who gets one of these letters is to write ten more. For instance, we could get from the list of the bee-papers a certain number of Illinois bee-keepers, and send out a letter to that effect, that the one who receives it write ten personal letters to ten of his friends, and have each one write the Legislature. In that way couldn't we get a big lot of letters?

Pres. York—Do you wish the letters sent to the committee, or to the committee in the Legislature?

Mr. Niver—For one, I must know who is the representative of my district. I never did know yet.

Mr. Hutchinson—We went so far as to publish them in the bee-papers.

Mr. Niver—As a rule, I think, very few bee-keepers know who represents them in the State Legislature. I don't think I ever knew that fact yet. That is as much of a politician as I am.

Mr. Moore—Ask the policeman on your beat; he will tell you.

Mr. Niver—There is none.

Mr. Moore—Or the postmaster.

Mr. Niver—I know the postmaster. By getting a lot of letters in that way to our committee at the Legislature—whatever plan would be thought best—I think we would get a large number of letters in a very short time on that plan.

Pres. York—That letter can be considered when the committee is appointed.

Mr. France—I will say that I took the pains to correspond in Washington with our representative, and got a copy of the statistics on bee-keeping in the United States Census.

Mr. Moore—Can we get that by writing to our member in Congress?

Mr. France—Yes, sir.

Mr. Moore—What is the title?

Mr. France—United States Census Report of 1900, on Agriculture. I could, by opening my grip, give you the statistics for Illinois, if you want them.

[Messrs. Herman F. Moore, Chas. Clarke, and C. F. Kannenburg, have been appointed as the committee to co-operate with the State Committee on Legislation, who are, Messrs. J. Q. Smith, Jas. A. Stone, and Chas. Becker.—George W. York.]

(Continued next week.)

Honey as a Health-Food is the name of a 16-page leaflet ($3\frac{1}{2}$x6 inches) which is designed to help increase the demand and sale of honey. The first part is devoted to a consideration of "Honey as Food," written by Dr. C. C. Miller. The last part contains "Honey-Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by every one who has honey for sale. It is almost certain to make good customers for honey. We know, for we are using it ourselves.

Prices, prepaid—Sample for 2 cts.; 10 for 10 cts.; 25 for 20 cts.; 50 for 35 cts.; 100 for 65 cts.; 250 for $1.50; 500 for $2.75; 1000 for $5.00. If you wish your business card printed at the bottom of the front page, add 25 cts. to your order.

Contributed Articles.

Big Honey Harvest Expected—Spring Care of Bees.

BY C. P. DADANT.

I believe that, since I have been in the bee-business, the prospect for a good honey crop has never been better than it is at present—in this part of the world at least. For ten years or more, the white clover has been an entire failure. From different causes—drouth, hard winters, etc.—it has failed to show up as it had done in former years. In 1889, for instance, our crop, from white clover alone, was upwards of 80 barrels. But at that time our pastures, our meadows, were like a white carpet at the time of clover-bloom.

During the past wet season, young white clover has come up in abundance. I can hardly pass a spot of pasture-land without seeing the white clover leaf peeping out from under the snow. The shelter made by snow has been good so far; the green grass and clover have suffered none from the cold. There is a good harvest in prospect, unless something unexpected happens.

The apiarist who is anxious to succeed ought to be well prepared, if this crop comes, to take full advantage of it. If the winter is mild, the bees may prepare themselves fully and in good time, but there is quite a point to be gained by helping them artificially. What they need is early breeding, and plenty of warmth. Our hives must, therefore, be well protected from the cold, especially from the keen northern winds of February and March. If the hives are populous the bees will begin to breed early and will consume plenty of honey. One must make sure that none of them are compelled to stint themselves for want of a sufficient amount. The weak colonies should be reduced to the space they can well cover and should be stimulated, whenever there is mild weather, by a little feed given judiciously where the bees can reach it easily, and where the robbers will not be likely to get to it. The amount fed to colonies for stimulating the breeding must not be large. In most cases one or two teaspoonfuls of warm food will show beneficial results for several days. Feeding small quantities, and feeding often, is much better in spring than feeding large amount of honey all at one time. It is also better to feed diluted sugar than strong-smelling honey. The former will give no smell, while the later, especially when warm, will have a decided influence on robbing, inducing many of the bees to lurk about the hives in which the colonies are fed.

A very warm situation for hives is not objectionable, in spring, but on the contrary is conducive to good results. I once established an out-apiary at the house of an old Frenchman who had been a gardener, and owned a small hot-house. This little building was established at the head of a ravine which had washed away the soil to a depth of about 6 feet, with a width of some 20 feet, close to the old gardener's home. This ravine was a very ugly-looking chasm and an eye-sore till he devised this hot-house walled in on three sides at the head of it.

Not only the establishing of this building had effectually stopped the enlarging of this ditch, but it had given him a good place for raising early vegetables. The front was all glass, being faced to the southward. When I brought my bees to his place he had quit gardening, his hot-house was useless, and he had hit upon a plan of putting his six hives of bees side by side in this building for winter. When the weather was very cold a wooden front was hung over the glass front of the house so as to keep the bees quiet. But it is astonishing how quiet they would keep even if the front was open, whenever the weather was too cold. No matter how warm it might be inside, they would not sally out, but would remain quietly at home. But it did not take much to stir them up, and the least intrusion was resented by them.

Those hives were rich in stores. They began breeding early in the season, and when I moved some 25 hives to the same apiary, in the month of April, it was plain that either of these six hives could have furnished four times as many bees as my own which had been moved to this place from an ordinary summer-stand in our home-apiary. When the apple-blossoms opened, those bees were ready for work and took in some surplus—a thing which I had never seen before. When the clover came, the six colonies began to swarm, and I dare say we harvested more swarms and took more honey from those six colonies than from the other 25 put together. Some of the earliest swarms cast some swarms themselves which made good colonies before fall. From 31 or 32 colonies, all told, we increased to some 60, and took four or five thousand pounds of surplus honey.

In my mind this evidences the necessity of keeping our bees well sheltered from the cold in the spring. But to keep them sheltered means nothing if they do not have a plentiful supply from which they can draw to breed, and it is in this that large hives are of use. With large brood-chambers, there is always a plenty of honey, if the colony has been treated right the previous season. So the bees are more likely to be able to breed, when they should. But in any case, it is not a bad policy to give stimulating feed. As I said before, it must be given in small doses. We are not aiming at the storing of honey. All we want is to keep the bees active by giving them to understand that help is at hand. If my reader has never tried it, he does not know how quickly bees get accustomed to being fed. Give a colony nourishment for three days at the same hour and at the same place, and they will expect it the fourth day, exactly as if they were spoiled kittens or well-fed chickens. But the feeding must be done in a judicious manner.

If you want to feed your hens to made them lay, you would not throw your grain to them in a 4-inch snow, or at improper hours. Your aim would be to place it where they could get at it without getting too cold or without having to stay off their perch at an unseemly hour You must treat your bees as you would your hens—keep their habits in mind, and feed them only when and where they will not be compelled to become chilled to reach the food. Remember that their honey-supply is expected to last them till the warm days come, and if you give them extra feed, give it only when you know that it will do good and can do no harm.

If the bees are fed early in the morning in cold weather, or when they ought to stay in the hive, a great many of them will become excited and will rush out and get chilled. If food is given for stimulating breeding, it should be given in the evening when there is but little chance of the bees venturing out, and when the robber-bees are not likely to disturb them. Hancock Co., Ill.

Methods of Rearing Good Queen-Bees.

BY L. STACHELHAUSEN.

MR. HENRY ALLEY expresses the opinion that no good queens can be reared by a colony having a fertile queen. This is an astonishing assertion if taken into consideration that in the natural state all queen-larvæ during the swarming-time are nursed by bees when a fertile queen is in the hive; the same is true when an old queen is superseded by the bees. The queens reared in queenless colonies are rare exceptions. But I think Mr. Alley is opposed to the upper stories over a queen-excluder for rearing queens in them.

I am of the opinion that in these upper stories as good queens can be reared as in queenless colonies, and by both ways worthless queens, too, if we do not observe some other important points.

Mr. Alley correctly says, on page 725, "The entire thing lies with the nurse-bees." If our bee-keepers had given more attention to the nourishment of bees such questions would have been settled long ago. Such analyses as Mr. Alley asks for were made years ago, and they show that the food given to queen-larvæ, or that given to worker-larvæ less than four days old, and that for young drone-larvæ, have a different chemical composition, nevertheless they all are *fully* digested pollen and honey (chyle), and are prepared by the young nurse-bees in the true stomach. The chyle is identical with the blood of the bee, showing even the blood-globules. All this is sufficiently proven, but in some of our text-books we do not find it mentioned, or an incorrect explanation is given.

How the same food can have these different compositions is explained in different ways, but as this is more theory I will not say more about it. We know that the bees need a good supply of pollen and honey to prepare royal jelly, or still better if pollen and nectar is gathered from the field. Further, we know that a colony has more and richer larval food (and this is royal-jelly) if the number of young bees is large compared with the number of young larvæ. These young bees prepare the chyle and feed the larvæ instinctively; if not enough young larvæ are present the young bees find no consumers of the chyle; it remains longer in the stomach and is getting richer in albumen. This surplus of young bees, and consequently of chyle, causes in swarming-time the building of queen-cells, and at last swarming; at other seasons, if a queen is not prolific in egg-laying any more, we have again a surplus of young bees, and the old queen will be superseded. A large surplus of young bees compared with the *open* brood is the most important thing for rearing queens. In a colony with old bees only, or in a weak colony, we will get worthless queens. We have to consider this, we may rear queens in upper stories or in queenless colonies.

I rear some queens for my own use and none for sale. I rear them in upper stories over an excluder, and at a season when the bees are gathering honey, and I think no better queens can be reared. If I had to feed the colony I would probably prefer a queenless colony.

The advantage of these upper stories is not to get better queens, as by a queenless colony if properly managed, but it is that this colony is not spoiled for honey-production, and is developing in the lower story just as well as any other colony; this is a great advantage. Besides this, the preparing of the colony takes less time and labor. For rearing queens in upper stories we must have a strong colony, or the cells are not accepted; but queenless colonies will rear some kind of a queen even in the poorest condition. For this reason in upper stories there is less danger of getting worthless queens. I know this, because this way of queen-rearing is the main cause that Italian bees and artificial queens have lost all reputation in Germany.

I will describe the way I use for rearing queen-cells:

1. I take 5 or 6 brood-combs without bees, from some other colonies, and hang them in an upper story over a queen-excluder and over a strong colony.

2. Eight or ten days afterwards nearly all of this brood is capped, many young bees are hatching daily, and as no young larvæ are present a surplus of chyle is prepared, and the colony is in proper condition for queen-rearing. Now I remove the hive to a new place, but the upper story with bees and all is set on the old stand. Soon this colony will show all signs of queenlessness, and now (in 2 or 3 hours) I give the brood-strips (Alley's method) between two brood-combs.

3. Twenty-four hours afterwards this hive is arranged, that is, the hive with the queen is set again on the old stand, and on top of it, over the excluder, the story with the now started queen-cells.

Sometimes I manipulate differently. I may give this queenless colony another set of queen cells and remove the first lot to another upper story prepared 7 or 8 days before. Or the first lot of queen-cells may remain in this queenless colony until they are ripe and can be used in nuclei, as this is the easiest way to prepare a queenless colony for cell-building, if such a one should be preferred. Probably it would be better to set this queenless colony with the entrance closed in a cellar and keep it without open brood for a long time, that is, to give the brood-strips later.

Some scientists believe that the youngest bees prepare the richest chyle, what we would call royal-jelly. If this is so, hatching brood should be present in the colony which rears queen-cells, and this is secured by the above plan. Mr. Alley takes away from a strong colony the queen and *all* the brood, and gives the brood-strips after some hours. Hereby we have the necessary surplus of young bees, and they are in proper condition, but this method could probably be improved by giving some capped brood at the same time with the brood-strips.

It is considered as very important to select larvæ for queen-rearing at the correct age. If the larval food for queen and worker larvæ (less than 4 days old) would be the same in the same colony, as some believe, any larvæ under this age would be good enough; but if the food for the young worker-larvæ and the royal jelly is different, as the analyses as yet seem to indicate, we should select larvæ as young as possible. To decide this question it would be necessary to analyze larval food taken from queen-cells and worker-cells from the same hive and at the same time. This was not observed in the analyses mentioned above. Besides this, we see oneother difference—the queen-larvæ are always floating in an abundance of food, the young worker-larvæ, too, as long as they are small, receive more food than they consume, but later not so much food is given any more. For this reason very young larvæ are preferable under all circumstances. If we use Alley's brood-strips we can select quite young larvæ, not larger than the eggs, or we can select even eggs lying flat on the bottom of the cells, which are very near to hatching.

Artificial cell-cups will not produce better queens than natural ones; their advantages are that we do not need to cut any brood-combs or to destroy any larvæ as with the Alley method; they bear rougher handling, but I can't see any necessity for rough handling. The disadvantages are: We can't transfer quite young larvæ, just hatched from the egg; as some royal jelly is necessary for this method we must destroy some queen-cells already started, the whole process taking more time and labor than the Alley-strip method. The Alley cells must be started in a queenless colony; with the Doolittle artificial cups this is not necessary, but the most queen-breeders do it, so one of the advantages of artificial cells is lost. Grafting the cells takes more experience, and is more difficult for the beginner than to prepare the brood-strips. What method a bee-keeper will prefer depends entirely upon how great or little he estimates the different advantages and disadvantages. After trying all the different methods I went back to the Alley strips, and can't help believing that if the artificial cell-cups are preferred it is merely a case of fashion.

If the cells are nearly ripe, they are generally introduced to nuclei, or we let them hatch in a nursery and introduce the young virgin queens. If the latter plan is used, the queen should remain in the nursery as short a time as possible—the younger the queen the easier it is to introduce her safely, and a young queen kept in the nursery for some days is always spoiled more or less, and sometimes she will be a dead queen. For these reasons I use the nursery as little as possible—I would rather form new nuclei, if I happen to have more good cells than I need.

The size and strength of the nuclei are of importance, too. For more than 40 years, once in a while somebody recommended using quite small frames, and to use 2 or 3 of them and a few bees to form a nucleus. The greatest disadvantage of these small nuclei is, that too large a percentage of young queens are lost. I tried the plan a few times in different years, and never was satisfied. The nucleus should have at least 2 or 3 of the regular frames and enough bees to cover these frames. On the other hand, the nucleus should not be too strong. In a 2 or 3 frame nucleus the queen is found at once; if 6, 7 or more frames are covered with bees it takes, sometimes, considerably more time and labor. If my nuclei are getting too strong I divide some of them, and if I should get more than I need for queen-rearing I unite with some other one, or strengthen them in another way, and work them for extracted-honey production.

To get the queens fertilized in an upper story over an excluder does not work satisfactorily even if a double excluder is used. When I expected the young queen was laying eggs I found she was missing. As far as I know the plan is abandoned. If we use a wire-cloth in place of the excluder, we have in fact a separate nucleus which could just as well be placed on another stand. The only advantage is, that this nucleus is warmed somewhat by the strong colony in the lower story, and both can be united at once, if the nucleus is not needed any more. For this reason the plan seems good in a Northern climate, if queens should be reared early in the spring.

I rear my queens in February, March, and some in April. In May our main honey-flow commences, and at that time I make forced swarms for comb-honey production. By this manipulation I can get a large number of combs containing capped brood only. If I use these brood-combs for strengthening the nuclei I can give them a hive full of them at once, and in a short time I will have a strong colony, and can get a crop of extracted honey from it the same year. Bexar Co., Texas.

Why Not Help a Little—both your neighbor bee-keepers and the old American Bee Journal—by sending to us the names and addresses of such as you may know do not now get this journal? We will be glad to send them sample copies, so that they may become acquainted with the paper, and subscribe for it, thus putting themselves in the line of success with bees. Perhaps you can get them to subscribe, send in their dollars, and secure for your trouble some of the premiums we are constantly offering as rewards for such effort.

* * *

The Premiums offered this week are well worth working for. Look at them.

The National Association

N. E. France the New General Manager.

EDITOR AMERICAN BEE JOURNAL, Chicago, Ill.—

Dear Sir:—N. E. France, Platteville, Wis., General Manager and Treasurer-elect of the National Bee-Keepers' Association, has qualified by furnishing a bond as required by the Constitution of said Association. He is, therefore, duly qualified to perform the duties of such office.

Very respectfully, W. F. MARKS,
Feb. 17, 1903. *Chairman Board of Directors.*

The above notice ends the General Managership muddle, one of the most unfortunate and inexcusable pieces of mismanagement we have known for a long time. Of course, Mr. France was in no wise responsible for the mismanagement nor the questionable methods resulting in his election, and he condemns them as strongly as any one possibly could. It certainly will not be pleasant for him to serve under the circumstances, as he knows that unfair means were employed to put him in his new position. We believe, however, that he will serve the Association to the best of his ability during the rest of this year.

* * *

Producer's Name on Honey-Packages.

As several articles have appeared in the papers on this topic, I wish to say a word.

I go to any grocery store and buy, if you please, any kind of goods, such as canned fruits, vegetables, fish, breakfast foods, or any other article on the shelf. Each package has an attractive wrapper with flashy colors, also the name and address of the producer or firm said goods are prepared for. Go where I will, the same brand sells for the same price. Suppose I decide that some particular firm puts up the goods that suits me best. I find I can depend upon that brand, it makes no difference whether I buy it of Smith or Jones of my city, or X Y Z of any other city. Remember the producer's name is on each package. Suppose I want to buy that brand from the producer, and save the profit of the middle man. I write the firm for goods or prices, and what do I get? My letter is returned to their local dealer to supply the order, and a reply to me from the producer that their business is done only through their local agents, that they sell direct to wholesale jobbers or the local agents.

All kinds of producers and manufacturing industries, after careful testing every means of marketing and the protection to their business, have found this the only safe way to do business. By this method the producer, as soon as his produce is in marketable shape, can dispose of the entire crop, get his cash, and at once devote his entire time and money to producing the next crop. Marketing is a business that demands more skill and business tact, and the wholesale jobbers have worked every possible means of marketing. It may seem to me as if, when I buy a can of goods, the price I pay is enough to pay profit to each dealer and the producer also. This is partly true, but, the facts are, by these careful business methods and sharp competition the goods are now sold much cheaper than would be possible with any other method.

You say, What has all this got to do with the name on the bee-keeper's honey-packages? I ask, Are we bee-keepers, or our honey, better than others? and is there any better marketing method? Is it not time that we learn to market our goods with attractive labels and our name thereon, and also the National Honey Exchange stamp as the jobber? Then our honey, except for home market, as soon as ready for market, will go to the nearest warehouse to be graded by an expert, and stamped what the contents are. It may be produced by A B of N. Y., or X Y Z of California. The National stamp is a guarantee of the purity and kind of honey. Then, under one grand, united system we can produce the honey and be a partner in the profits of the middle-man, also getting better prices, and avoiding overstocking one market and the next town going without.

The wisdom of this will be proven by the local organizations now incorporated, and in the near future all combining into the one National. Not only the selling of honey, but the buying of supplies, getting better transportation rates on bees by freight, and needed legislation in the various States to protect the bee-keepers. There are over 700,000 bee-keepers in the United States, and quite a large number in Canada, and I am sorry to say only a few over 1000 now belong to the National Bee-Keepers' Association. It is rapidly growing, and the prospects are that many large gatherings of bee-keepers during the year will become a part of the National, as by so joining the annual dues are only 50 cents each to the National. Let every member bring at least one new member into the fold, and add to the strength of the Association. In *union* there is strength.

N. E. France,
General Manager National Bee-Keepers' Association.

P. S.—I am now working to amend a Bill in the New Mexico Legislature, compelling the spraying of fruit-trees, so as to protect the interests of bee-keepers and fruit-growers. There is also an attempt being made to have the Iowa Legislature enact spraying laws. N. E. F.

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

A Cool Morning.

Sixteen degrees below zero this morning, Feb. 17. That is the coldest it has been this winter. Glad our bees are in the cellar.

Brilliantine for the Hair.

A good brilliantine for dry, harsh hair is made by mixing well together one ounce each of glycerin and bay rum, adding two ounces of clarified honey and four ounces spirits of wine. Rub a little well into the scalp once a week.—"Health and Beauty" Department, Chicago Daily News.

Bee-Keepers Always Hopeful.

Bee-keepers, as a general rule, are looking forward to the next season, and usually expecting a good crop. It is pleasant to keep up our courage by talking of the favorable signs. The prospects here seem good. The clover covered the ground abundantly last fall, and until late in the season the growth was vigorous. Since then it has been covered most of the time with a light fall of snow. So the promise for 1903 is good.

Honey in Putting Up Fruit.

Having seen a request in the "Sisters' Department" for persons to give their experience in putting up fruit with honey, I thought I would give mine.

Some years ago I saw in the American Bee Journal an article on preserving grapes in honey, by laying the grapes (picked from the stems) in a jar and pouring extracted honey over them until covered; and that they would keep any length of time. We gave it a trial, but in a short time the acid in the grape caused it to ferment.

Then we experimented still further, by cooking the grapes and honey, and were surprised, on eating them, to find them so delicious. This led me to use it again at different times, in sweetening cherries, raspberries, blackberries, apples and grapes; and we liked it in everything except apples. Our friends, when visiting us, all spoke highly of our fruit, and, with very few exceptions, said they could tell no difference in flavor.

I have never used honey in preserving fruits to any extent, for long cooking destroys the honey-flavor, and makes it strong. I have used it in making grape marmalade, using half sugar, and it was fine.

As to the amount of honey used, I sweeten to suit my taste, and have used both liquid and granulated. I know it can be used successfully in some kinds of fruit, and will keep any length of time, and the only reason I do not use it every year is the scarcity of honey so much of the time, that sugar is cheaper for me.

I have used honey in making cakes and cookies, and for making popcorn balls nothing could be better; cooking the honey until it will spin from a spoon, and then pour over the corn and make into balls. Mrs. J. L. Strong.

Page Co., Iowa.

Thank you very much, Mrs. Strong, for giving us so fully your experience with putting up so many different kinds of fruit with honey. I am sure you have given it quite a trial, and proved to your own satisfaction at least, that it can be made a success. I have no doubt that you are right, that it may be cheaper to use sugar, and the lack of honey may prevent a good many from using it. Still, if honey is so much more wholesome it may be cheaper to use it even if it costs more in dollars and cents.

The only kind of fruit that we have tried with honey is strawberries, and they were good. I confess that I should not have known whether they were put up with honey or sugar if they had not been labeled. We used a very fine grade of alfalfa honey which had no very pronounced flavor. It comes the nearest to just a pure sweet of any honey I ever tasted, and for that reason is fine for cooking purposes.

I have made honey popcorn balls, only I used part sugar. They were fine. Next time I am going to try all honey and see what success I have.

The person who uses the most honey in our family is my mother, and she uses a small quantity at almost every meal, and has done so for some years. Last Sunday (Feb. 15) she celebrated her 84th birthday. She is a remarkably preserved woman for her age, both physically and mentally. One thing that is a little out of the ordinary is, that she never uses tea or coffee. For breakfast she has a drink of hot water, honey and cream, and seems to enjoy it as much as most people advanced in years do their tea and coffee. How much of her good health may be attributed to the use of honey I don't know, but I believe it is good for her.

⁕ The Afterthought. ⁕

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, O.

THE "SNIPPER" AMONG BEE-KEEPERS.

"Many a true word is spoken in jest"—and many an apt saying, without father or mother, is born of a typographical error. When Carlyle wrote the hackneyed old expression, "Dead Sea apples," the types made it "Dead Sea apes;" and in that form it went round the world with a rush. We rather need a name for the man who produces honey—white, amber, and dark, fancy and culls—and mixes all in the same case. According to page 67, he's a "snipper." Instead of cutting an honest garment "according to his cloth," he snips it full of holes. Snips his consignees' good-nature into shreds. Snips badly the consumer's right to have what he orders. Snips his own pocket-book nicely, too—we are almost glad of it. Possibly he thought he could snip off the time and expense required to case correctly. Seems to be a case of snip and be snipped on his part, as evidently his common-sense has been snipped badly. And the moral is, Don't be a Snipper.

Hope the types will soon furnish a name for another fellow worse than the Snipper, who is abroad in the world. A Toledo grocer recently showed me some of the fellow's honey, and wanted my opinion of it. Not graded correctly, eh? That time you missed it. Graded straight as a string; but *such* a grade—it was a long way below culls—unsealed nectar with the combs not built out to proper thickness yet.

SIMMINS' SHAKEN SWARM.

The Simmins modification of the shaken swarm deserves a trial. We want to see what "locality" it is going to work in. To have no increase and no weak colony would be just splendid. Practically, what's to hinder the bees of No. 2 from going back home? And those that don't go will be nurses—not needed in their new home, and decidedly needed in their old one. And might the queen of No. 1 get balled? And might the over-abundant nurses with nothing else to do insist on rearing young queens? Mr. S. says No. 2 gives up the idea of swarming. That is reasonable. Would it be worth while for us to find out whether any possible case of swarm-fever might not be halted by ruthlessly getting away *all* the young nurses too callow to fly home? Page 67.

MALT EXTRACT AS A SOURCE OF SUGAR.

Ah, but, but! Malt extract is not taken simply as a source of sugar. It is hoped that that curious presence-action, which is one of the wonders of chemistry, resides in it. Chemicals sometimes do their duty when certain "boss" substances are present, and neglect their duty when the boss is away. If Dr. Hutchinson will go to work and prove that honey is a better digestion-boss than malt extract, that would be something like. At present I believe the dominant word is that honey itself is easy of digestion, but that it interferes with the digestion of other things. Page 67.

FELT LIKE GETTING RAMBLER BACK.

And Rambler gone, too! When I heard it I felt a little bit as Orpheus did when he heard Eurydice was dead—felt like getting him back again. Page 68.

SWARMING AND AFTER-SWARMING.

I rather guess that Mr. Darling is right, on page 69. It's concerning the period after the prime swarm has gone, the period when after-swarming, with its vexations and its unreasoning persistence, is on the carpet. Queens in the cells mean another swarm; but the idea advanced is that a lot of liberated queens running around on the combs rather constitute an influence in the opposite direction. Imaginably, I should say, you *might* get a swarm inside of an hour by liberating a lot of queens; but if they stay an hour they will swarm no more unless you have missed a cell.

MUSTACHED CANUCK NEEDN'T STAND ON HIS HEAD.

And that chap who has no other beard than a mustache which a bumble-bee might select for nesting purposes—the Canadians seem to think that he had best stand on his head when he eats bread and butter and honey. Exception in case the honey is best Canada, when merely inverting the slice would do. Page 70.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

Cleaning Moldy Combs.

What can I do with mouldy comb? Is there any special way to clean comb in which brood and bees have died? COLORADO.

ANSWER.—Nothing is needed to be done with either mouldy combs or those in which bees have died except to give them in care of the bees. They will clean them up in short order. A good way is to put a hive full of such combs under the hive of a strong colony. Then let the bees take their time to clean them.

What Was the Trouble?

1. One of my colonies of bees came out to-day at 12 o'clock, and settled on the ground near the front of the hive. I looked in the bunch of bees for the queen, but did not see her. I then looked in the hive to see what could be the trouble. Everything seemed to be all right. I found 2 roaches, and saw a little sign of worms, but only a small web at one side at the bottom of the frame. They had 6 or 8 pounds of honey in the hive. The temperature was about 70 degrees to-day. What could be the matter with them, and what made them come out? I put them back and they seem to be satisfied this evening.

2. Is 6 or 8 pounds of honey enough to keep them until March 15, with ordinary weather? NORTH CAROLINA.

ANSWERS.—1. I don't know what the trouble was, nor why the bees came out, unless it was that they had been confined for some time, and became very much excited when the weather warmed up enough for them to fly. Bees that have been wintered in a cellar swarm out in that way sometimes when taken out in the spring. But I suppose your bees were wintered outdoors, and it is not likely that they had been confined very long; so the best answer I can give is to say I don't know. I'll be glad if some one can give the right answer.

2. That depends upon how early the bees in your part of North Carolina can gather anything in the spring. From the time your letter was written till March 15 is 46 days, and during that time much honey will be used in rearing brood, so that it is somewhat doubtful whether they will have enough to last unless they have some good source from which they can gather before the 46 days are up.

Bees Sticking Frames Together.

I am a beginner in the bee-business, and have the Danzenbaker hive. The bees stick the frames together so that it is impossible to lift them out without jarring and making the bees ugly. Is there any way to remedy the trouble? NEW YORK.

ANSWER.—I know of no way of preventing bees from depositing propolis where two surfaces come together as with closed-end frames. Where propolis is troublesome I would rather forego the advantage of closed ends, and use some kind of self-spacers with the smallest possible points of contact practicable.

Bees in a Damp Cellar—Best Bees.

What difficulties may be expected from keeping bees in a damp cellar? and how can these difficulties be overcome while the bees are in such a cellar?

2. What is the best breed of bees known? IOWA.

ANSWERS.—1. Diarrhea is likely to result if the temperature is not sufficiently high. Bees have been reported as wintering in the best condition in a very wet cellar when the cellar was kept warm enough and well supplied with fresh air. Obviously the thing to do is to raise the temperature sufficiently, and to see that there is a sufficient change of air.

2. Opinions differ. Italians are quite general favorites.

Dividing to Prevent Swarming.

Being a new subscriber to the American Bee Journal I am not informed on methods discussed regarding the dividing of bees to prevent swarming. I am located in the "Alfalfa Belt," and would like to know the most successful way to prevent swarming; and to know if a novice is justified in attempting to do it. NEBRASKA.

ANSWER.—There is nothing difficult or complicated about the matter of shaken swarms, and you may as well start in on it first as last. So much has been said about the modus operandi that it is not necessary, probably, to give any further instruction about it; but if there is any point on which you would like to have light, don't be afraid to ask questions, and I'll answer them to the best of my ability.

Feeding Bees in Winter—Best Hives.

A friend gave me 2 colonies last fall, and informed me the hives were filled with honey and would last until spring. Jan. 15 I opened one of the hives, on a fine day, and found the queen and 5000 bees dead, and no honey in the comb. I then went to work (never did such a thing before), took 2 pounds of granulated sugar and made candy and shoved it down between the frames of the other hive. Yesterday (Feb. 10) being a fine day, I opened the hive again and found all the candy gone, and repeated the operation as before.

1. I want to know whether there is a better plan.

2. What is the best hive to have? A friend of mine has a hive with a glass door in the back, and holes in the top for small boxes of comb honey. NEW JERSEY.

ANSWERS.—1. Hardly, unless it would be to lay a cake of candy on top of the frames and then cover up warm.

2. Glass in a hive adds to it, but in a way of expense rather than of value. There are differences of opinions as to what is the best hive. For my own use I prefer the Dovetailed with Miller frames, but have no quarrel with those who prefer something else.

Management for Increase.

I have several colonies of bees with the supers on the hive now. Can I take them at swarming-time, as they are the same size of the brood-chamber, move the old hive away with the old queen, and leave the young colony in the place of the old one, and be all right? Is that a good way to increase my bees? TEXAS.

ANSWER.—If I understand you correctly, your idea is to take away the lower story and put it in a new place, taking the queen with it, leaving on the old stand the upper story, trusting to the bees to rear a new queen in the story that is left on the old stand. The plan may be successful to a certain extent, providing there is brood left on the old stand, among it being eggs or very young brood. But it will be very much better to leave the old queen on the old stand, with the story that has least brood in, for the whole field-force will be left at the old stand. It will also be a good plan to give a queen or a sealed queen-cell to the part removed. If you have to let the bees do the whole work of rearing their own queen, you will be more sure of a good queen by this plan: Remove the queen to the new stand, leaving most of the brood on the old stand; about a week later make the hives exchange places. You will see that by this means you will have your queen-cells reared in a colony with a strong force of workers, and then when you make the change the old queen on the old stand will have the field-force and a chance to lay all she wants.

Location for Bees—Transferring.

I am a beginner with bees, but have read a good deal on the management of them.

1. I will give the location that I am in, and would like you to tell me what you think I can obtain from each colony. I am about one mile from a creek bottom, having almost all kinds of growth, such as pine, sweet-gum, red-oak, maple, linden, elm, etc. We have lots of wild flowers, 1½ acres in peach orchard, a farming country, and no bees except mine. I have 6 colonies, and want to increase to 25. Do you think that will be too many for my location? I am going to run for comb honey, and I can get 12½ cents per pound.

2. I notice that a writer advises transferring in time of fruit-bloom or about 15 days after swarming. Why should I wait 15 days? I have 3 colonies to transfer. My bees are in very good shape, I guess, for they have some honey, and are watering to-day (Feb. 8). I don't put them in a cellar, but leave them out in the yard. TEXAS.

ANSWERS.—1. I don't know enough to guess within a long ways of what you will get per colony. After you have harvested the honey crops of five years you may be able to tell a little about it, but the succeeding five years may not be at all the same. But I would have no great fear about 25 colonies being too many for your location. Very likely it will support three times as many.

2. Don't you mean 21 days instead of 15? The reason for waiting 21 days is that at the end of 21 days all the worker-brood will be hatched out, leaving no brood to bother about.

Hives Where Bees Died with Foul-Brood.

I have 25 8-frame Langstroth hives in which the bees died with foul-brood. I have burned the frames and combs. Can I prepare and safely use the hives next spring? UTAH.

ANSWER.—Good authorities say it is safe to use the hives without doing anything to them. As an extra precaution you can wet the inside with kerosene, and burn it out.

Feeding Bees in the Cellar.

I have 85 colonies of bees, piled 5 high in a small cellar, with the bottom-board off and the cover on. They are short of feed, some having starved to death already. I do not see how I can feed them all candy on top of the frames, so I can get the cover back on, and so I can pile them again, as they eat it so slowly.

How would it do to feed them honey through the pepper-box feeder over the top of the frames (say 3 or 4 pounds), then replace the the covers and repile them as fast as they can be fed, a few at a time? MINNESOTA.

Your plan will answer. At the same time you are using the pepper-box feeders, and in order to expedite matters, are not the hives so placed that you can feed some of the colonies from below? Of course that will be only colonies so strong that the bees are down to the bottom-bars, in which case either honey or candy could be fed. You could also put candy over them, so far as room in the cellar would admit. By making a shallow frame to cover each hive, you could give the candy to each colony, put the frame over the hive, and then put on the cover. That would perhaps be the quickest way, if you do not care for the expense of the frames. A frame an inch or two deep would answer.

Perhaps Bulged or Crooked Combs.

I am in the bee-business on a small scale, having about 30 colonies, and am buying all I can get a hold of, that are in old boxes, kegs, etc. I hope to increase to 100 by fall. What bothers me is this: When I attempt to examine a colony, I find that when I raise the brood-frames out of the hive I break them, that is, as one is raised out it rubs against the sides of the adjoining ones and tears great, ugly patches in the comb. I used the Heddon-Langstroth hive, and the Langstroth frames, 8 to the hive, for comb honey only. Where is the trouble? I can't have the heart to cause my bees so much work, and I must look after them. I am particular in leveling up my hives each spring. Would it be better for me to use 7 frames instead of 8? CALIFORNIA.

ANSWER.—I'm not entirely sure whether your frames are built crooked in the frames or not. Of course, if they are built crooked, the crooked part should be cut where necessary and straightened in the frames. I think, however, that you mean the combs are straight in the frames, only they are so crowded together that when you try to lift one out it is rubbed, as you say, against the next comb. I wish I could see your combs; then I could tell better. If they are loose-hanging frames, and there is no dummy in the hive, then you must crowd together a number of the frames so as to make room to lift one out. If there is a dummy, lift that out first, so as to make room to lift out the first frame. More likely, however, you have fixed-distance frames. Perhaps there is a dummy, but so much propolis is crowded in between the frames that it is harder to lift out the dummy than it is to lift out one of the frames. In that case clean out the propolis from the parts that come in contact, thus making room enough to get the dummy out.

It may be that there is no dummy, but self-spacing frames that crowd the hive full. If so I am sorry for you. But don't be clear discouraged. Go to work and scrape the bee-glue off the parts that come in contact with each other, and if then you haven't room to get the dummy in beside the frames, use one frame less and put in a dummy at one side. But if the dimensions are all right there ought to be plenty of room for eight frames spaced 1⅜ inches from center to center and a dummy 5-16 or ⅜ beside. The inside width of the hive should be 12⅛ inches. It may be you are in a place where propolis is bad, and your frames are bad for it. If so, change to frames spaced with staples, or with nails like the Miller frames would be a great rerelief to you.

If, now, I haven't hit your case, be sure to come again and give me more particulars.

Sowing Sweet Clover.

As a further contribution to the subject I heartily endorse the following from Herman Betke, of St. Louis Co., Mo.:

"I have seen in the American Bee Journal that there are some inquiries as to the best way to sow sweet clover, and you advise to sow on hard ground, and let live-stock tramp it in. Now this is very good, but one may not have the live-stock, or it may not be convenient to have stock tramp in the seed, so I thought I would give you my way of sowing sweet clover.

"I sow on hard ground, and after sowing give the land a good scratching with a harrow. This will cover some of the seed, and a good rain will wash the loose soil over most of the rest. When the ground is very hard it may be advisable to run the harrow over the ground before sowing, and, of course, after sowing."

Granulated Honey in Extracting-Combs.

A great many of my extracting-combs were about half filled with honey, last fall, and I delayed extracting until the latter part of November, when I found it had granulated badly, and the extracting was very unsatisfactory, leaving the combs heavy with white granulated honey. What should I do with them before putting them on for the spring flow? SOUTH CAROLINA.

ANSWER.—You can melt up the whole business, and then when it gets cold pour out the honey, or take off the cake of wax. But that would ruin the combs, and is hardly advisable if the combs are good. Perhaps the best thing is to let the bees clean them out as soon as the weather allows frequent flights. Spray the combs with warm or hot water as often as the bees lick them dry. The combs may be put in the hives with the bees, but the work will be easier and more rapid if the combs be put out some distance from the apiary. If there is a time after bees can fly freely when there is nothing for them to work on, you will find that feeding these combs will be just the thing to boom brood-rearing.

Feeding Candy in the Cellar.

I don't know whether it is mere bad luck or through ignorance on my part, as a beginner, but my 34 colonies of bees, in the cellar, seem nearly destitute of stores. I have started to feed some of them Viallon candy. They stored honey in the sections until a short time before putting them into the cellar, Nov. 1; and just before putting them in the cellar I fed them until it got too cold. The temperature in the cellar ranges from 38 to 50 degrees, with no sudden changes.

1. How much candy would it take to feed 34 colonies of bees from now until the middle of April?

2. Would it do to set 2 hives on top of each other, with the cover off of the one, and the bottom off of the other, and feed them that way? That would be the same as 17 colonies. Would that be any cheaper? Would they fight and kill each other?

3. When I put the candy in upon the frames, that leaves the cover open about an inch all around. Is that all right? or what should I do? WISCONSIN.

ANSWERS.—1. The amount of candy consumed by a colony of bees in the cellar from the first of March to the middle of April is very variable. Better give each one not less than 5 or 6 pounds. Some of them may not need a third of it, and some of them may need all. It will not be a waste if you give them more than they need, for they can use it later.

2. Don't think of doing anything of the kind unless you wish to unite and have only 17 colonies remaining. The bees may not fight, but one of the queens will most likely be killed.

3. It may do, but it is leaving the hive pretty open, and it will be better to cover over with old carpet, gunny-sack, or something of the kind.

Queenie Jeanette is the title of a pretty song in sheet music size, written by J. C. Wallenmeyer, a musical bee-keeper. The regular price is 40 cents, but to close out the copies we have left, we will mail them at 20 cents each, as long as they last.

FROM MANY FIELDS

Nice Weather for Bees.

At the present time we are having nice, warm, spring-like weather. The spring birds are singing around, and the blue-bird has come, and it seems as if the backbone of winter is broken. The bees are taking advantage of such nice weather. They are doing finely this winter, and the prospects are good for a good honey crop. L. A. Hammond.
Washington Co , Md., Feb. 13.

Having Fine Rains.

We are having fine rains. Everything is looking all right at this time for a good honey season. S. Q. Conkle.
Orange Co., Calif., Feb. 10.

Carrying out Cellared Bees for a Flight.

Referring to the editorial on page 99, as to the benefit of carrying bees out of the cellar to have a flight in winter, I would say that last winter (February, 1902) I took out one colony that seemed to be very uneasy; the day was fine, the bees flew nicely, and after returning them to the cellar they seemed very quiet the balance of the winter. February 1, 1903, was a fine day, bees out in winter quarters flew nicely,

The bees in this locality did quite well the last half of last year, beginning with July 3.

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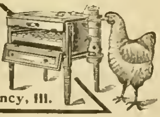

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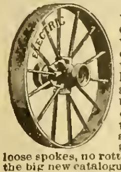

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WE WILL SEND to every subscriber or reader of the American Bee Journal a full-sized ONE DOLLAR package of VITÆ-ORE, by mail, POSTPAID, sufficient for one month's treatment, to be paid for within one month's time after receipt, if the receiver can truthfully say that its use has done him or her more good than all the drugs and dopes of quacks or good doctors or patent medicines he or she has ever used. Read this over again carefully, and understand that we ask our pay only when it has done you good, and not before. We take all the risk; you have nothing to lose. If it does not benefit you, you pay us nothing. VITÆ-ORE is a natural, hard, adamantine rock-like substance—mineral—ore mined from the ground like gold and silver, and requires about twenty years for oxidization. It contains free iron, free sulphur and magnesium, and one package will equal in medicinal strength and curative value 800 gallons of the most powerful, efficacious mineral water, drunk fresh at the springs. It is a geological discovery, to which there is nothing added or taken from. It is the marvel of the century for curing such diseases as Rheumatism, Bright's Disease, Blood Poisoning, Heart Trouble, Diphtheria, Catarrh and Throat Affections, Liver, Kidney and Bladder Ailments, Stomach and Female Disorders, La Grippe, Malarial Fever, Nervous Prostration and General Debility, as thousands testify, and as no one, answering this, writing for a package, will deny after using. Give age, ills and sex.

This offer will challenge the attention and consideration, and afterward the gratitude of every living person who desires better health, or who suffers pains, ills and diseases which have defied the medical world and grown worse with age. We care not for your skepticism, but ask only your investigation, and at our expense, regardless of what ills you have, by sending to us for a package. You must not write on a postal card. In answer to this, address,

8E3t **THEO. NOEL COMPANY, Dep't J. P., 527, 529, 531 W. North Ave., Chicago, Ill.**

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We are the Largest Manufacturers of Bee-Keepers' Supplies in the Northwest

Send for catalog.

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Charles Mondeng, Prop.

Minneapolis, Minn.

We have the Best Goods, Lowest Prices, and Best Shipping Facilities.

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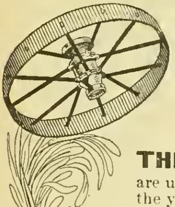
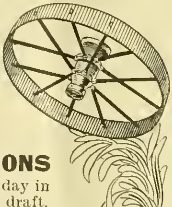
Have You Seen Our Blue Catalog? 60 illustrated pages; describes **EVERYTHING NEEDED IN THE APIARY.** **BEST** goods at the **LOWEST** prices. Alternating hives and Ferguson supers. Sent FREE; write for it. Tanks from galv. steel, red cedar, cypress or fir; freight paid; price-list free.

KRETCHMER MFG. CO., box 90, Red Oak, Iowa.

Agencies: Trester Supply Co., Lincoln, Neb.; Shugart & Ouran Council Bluff Iowa; Chas. Spangler, Kentland, Ind. 12E26t





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THE FARMERS' HANDY WAGONS

are useful and time and labor saving every day in the year. Low down, they load easily; low draft, they are easy on the horses; wide tired, they do not cut ruts across the fields. The wide platform will carry a big load without building it high. For hauling tools to and from the field, hauling manure, hauling hay, grain, logs, lumber, or anything else where a big, wide load is to be moved the Farmers' Handy Wagon is better than any other vehicle. Stronger and more durable than any other wagon. Wooden wheels guaranteed to hold tires **five years.** Iron wheels have spokes **hot-forged** in, **not** cast in. Dealers sell them. Send today for latest catalogue containing full details of the many ways in which our wagons are superior to others.

If your dealer cannot or will not get this wagon, do not buy any other without first informing yourself concerning the Farmers' Handy Wagon. Remember no other is "just as good."

FARMERS' HANDY WAGON CO.
SAGINAW, MICHIGAN

D.P.Co.

Please Mention the Bee Journal when writing Advertisers *****

We look forward for a good year the coming season, but can not just tell yet which way the wind will blow.

If the bees confined in the cellar are uneasy, and a day comes in midwinter that will give them a chance to fly freely, I believe it will pay to give them a chance. If snow is on the ground scatter straw freely over it for a few rods around—a little will go a long way. This last advice is for beginners; the veterans know how.

I have been a constant reader of the American Bee Journal for eight years. "The proof of the pudding is in chewing the string," was an old saying, but I prefer to eat the pudding; this I get in what I learn from the "Old Reliable." L. G. BLAIR.

Grant Co., Wis., Feb. 13.

A Disagreeable Winter.

It is a bad winter here—cold, windy, and very disagreeable all the time. I saw bees flying a few days ago. They were in fine condition. My 53 colonies are all doing nicely.

HENRY ALLEY.

Essex Co., Mass., Feb. 23.

Robber-Bees Stinging—Forced Swarming—Smoker-Fuel.

I notice on page 543, about "Robber-Bees Stinging," and I agree with W. W. McNeal, of Cook Co., Ill. I had a colony of black bees (weak), placed away from the rest of my apiary, the rest of my bees being Italians. The Italians started to rob my blacks, and as

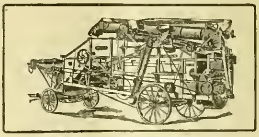
The Thresherman

makes waste when he uses a makeshift or buys a machine of doubtful value. He gets a known, dependable quantity in the

NEW RUMELY SEPARATOR.

It comprehends the widest uses, does the fastest and most perfect work, is the simplest in construction, has the longest life and makes more money for its owner than any other thresher made. Serve your interests by studying it before buying. Our large illustrated catalog shows wherein it excels others. Also describes our famous Traction Engines. Write for it. It is free for the asking.

M. RUMELY COMPANY, LA PORTE, IND.



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EAST ST. LOUIS, ILL.

We carry a complete stock of HIGGINSVILLE BEE SUPPLIES at the above place. Our eastern customers will save considerable freight by ordering from them. Kind and courteous treatment, low prices and prompt attention our motto. Address, LEAHY MFG. CO., 2415 Ernest Ave., Alta Sita, East St. Louis, Ill.

Catalog Free.

SHEEP MONEY IS GOOD MONEY and easy to make if you work for us. We will start you in business and furnish the capital. Work light and easy. Send 10 cents for full line of samples and particulars.

DRAPER PUBLISHING CO., Chicago, Ills.

Please mention Bee Journal when writing.

I went to the robbed colony I very soon found out that robbers do sting. I contracted the entrance so that one bee at a time would pass, and saved my black bees.

I am hard against any way of increase except by natural swarming. When there is no nectar in the fields to gather, why, you do not have to feed the nuclei of brushed swarms; nor any weak ones made by unnatural swarming. You may leave the swarm and return after-swarms, or cut queen-cells out and prevent after-swarms.

For smoker-fuel I find nothing better than hard maple, cut as long as the smoker, and split and put in with a lot of coals in the bottom to start it. One smoker full will last a half day, or longer, if you don't use it much.

Jones Co., Iowa. G. B. WILLIAMSON.

The South Dakota Convention.

The South Dakota Bee-Keepers' Association held its annual convention Jan. 28, in Yankton. There was a good attendance, and there were many subjects of interest discussed. There is a growing interest in apiculture in the State. We expect to double our membership this year, and also to produce double the honey of former years, if the season is favorable. Last season was a poor one for honey in this locality, our average being about 50 pounds per colony of comb honey, and 100 pounds of extracted.

The bees seem to be wintering well, those on the summer stands especially. Mine had a good flight Jan. 15, and they were all alive

Write for Catalog Today

$40

SPLIT HICKORY

WINNER TOP BUGGY

Made of selected second growth split hickory throughout. Handsome and durable. This is a thoroughly high-grade vehicle at a low price and has heel braces on shafts, panel carpets, leather quarter top, solid panel spring back, open bottom spring cushion, boot on back of body, high leather dash, storm apron, side curtains, oil and lead paint (choice of colors), open hearth oil-tempered springs, Norway iron clips, bolts and forgings and a hundred other points of merit. Guaranteed for two years.

SENT ON 30 DAYS' FREE TRIAL.

Hitch up to it and use it before you decide. It will pay anyone to borrow the money and pay interest on it to take advantage of the great saving contained in this buggy bargain. It is an investment for years. Secure our large catalogue, sent free if you write, describing this and numerous other vehicles and harness at bargain prices. We lead the world in quality, style and price. Address

OHIO CARRIAGE MFG. CO., Station 6, Cincinnati, O.

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GRAPES.

Most delicious and palatable of all fruits, but they taste better if picked fresh from your own vines. Six strong, perfectly hardy plants, 2 red, 2 black and 2 white, with our new directions for culture so that failure is impossible, for only 75 cents, charges prepaid. Large illustrated seed and plant catalog free if you mention this paper.

IOWA SEED CO., Des Moines, Iowa.

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Marshfield Manufacturing Company.

Our specialty is making SECTIONS, and they are the best in the market. Wisconsin BASSWOOD is the right kind for them. We have a full line of BEE-SUPPLIES. Write for free illustrated catalog and price-list.

Marshfield Manufacturing Company, Marshfield, Wis.

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$5 FOR NOTHING.

We have paid that sum several times for less information than is contained in our grand new book, "*How to Make Money with Poultry and Incubators.*" 8x11 inches, 196 pages. It has 12 special chapters by the best experts in the country covering the entire poultry subject. Over 300 illustrations and photographic views of the *Largest and Most Successful Poultry Plants* in this and other countries. Tells about the CYPHERS INCUBATORS. *It will be sent FREE POSTPAID for the next 30 days* to all who mention this paper in writing. Address nearest office.

Self Supplied Moisture

CYPHERS INCUBATOR COMPANY.

Buffalo, N.Y. Chicago, Ill. Boston, Mass. New York, N.Y.

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Calves Fenced

With Page Fence never grow into breachy cattle.

PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.

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Practical Apiarist Wanted for the season of 1903, or longer, to work with experienced manager of large apiary. State age, experience, references, wages expected, etc. Single man with ability to use carpenter's tools preferred. Address,

P. E. G., care AMERICAN BEE JOURNAL,
144 E. Erie St., CHICAGO, ILL.

$300,000,000.00 A YEAR and you may have part of it if you work for us. Uncle Sam's poultry product pays that sum. Send 10c for samples and particulars. We furnish capital to start you in business. Draper Publishing Co., Chicago, Ill.

Prevent Honey Candying

Sent free to all.

HENRY ALLEY, Wenham, Mass.

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BINGHAM'S PATENT Smokers

25 years the best. Send for Circular.

25Atf T. F. BINGHAM, Farwell, Mich.

If you want the Bee-Book

That covers the whole Apicultural Field more completely than any other published, send $1.20 to

Prof. A. J. Cook, Claremont, Cal.,

FOR HIS

"Bee-Keeper's Guide."

Liberal Discounts to the Trade.

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POULTRY PAYS

when the hens lay. Keep them laying. For hatching and brooding use the best reasonable priced Incubators and Brooders — built upon honor, sold upon guarantee,

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THE ORMAS

L. A. Banta, Ligonier, Indiana

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We have received a car-load of these unique supplies. These goods are equal to if not the best on the market. Give us a trial order. We are also agents for the PROGRESSIVE BEE-KEEPER, price, 50 cents per year. Send your orders and subscriptions to us. We sell at factory prices. W. D. FULTON,
Catalog Free. Garden City, Kan.

Wanted To Buy BEES, IN OR NEAR CHICAGO. Address,

ALBERT RICHTER, 157 Rhine St., CHICAGO, ILL.

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TREE GROWN FROM SELECTED BEARING TREES

FREIGHT WE PAY IT

FREE OUR BOOK HOW TO GROW FRUIT SEND FOR IT

TITUS NURSERY NEMAHA NEB

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Root's Goods at Root's Factory Prices.

Complete stock for 1903 now on hand. Freight rates from Cincinnati are the lowest. Prompt service is what I practice. Satisfaction guaranteed. Langstroth Portico Hives and Standard Honey-Jars at lowest prices.

You will save money buying from me. Catalog mailed free. Send for same.

Book orders for Golden Italians, Red Clover and Carniolan Queens; for prices refer to my catalog.

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Office and Salesrooms—2146-48 Central Ave.
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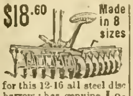

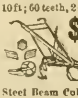

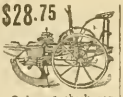

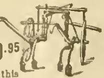

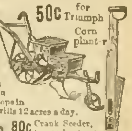

$18.50 for this team harness, cut from oak-tanned leather, traces 1¼ in. 18 ft. lines: Hook & Territ pads. 98 styles to pick from. Single harness $4.45 to $21.00. Double, $10.00 to $45.00.

$18.60 Made in 8 sizes for this 12-16 all steel disc harrow; has genuine Ludow bumpers. Dust proof oil tubes. The Most Perfect Made. We have other style discs for $15.25. We save you about 1-2 in price.

$8.30 steel lever harrow; cuts 10 ft; 60 teeth, 2 sections.

$2.10 Steel Beam Cultivator, plain, with 5 shovels.

$8 Mathews New Model garden drill, large size with 11 tools. $4.75 for the Comas drill only, same principle as above. If you want a garden tool, write us.

$28.75 Calumet check row planter with automatic reel and 80 rods wire. Never misses, drops in hills and drills. We challenge the world with this planter. Will ship on trial.

$9.95 for this 2 horse cultivator. Retails at $15 to $18. $15.95 for riding cultivator. Seven styles, 25 combinations. Most Wonderful Cultivator Bargains ever offered. Also Plows.

$10.50 One-Horse Corn, Bean and Garden Seeder. Drops in hills and drills 12 acres a day. 50c for Triumph Corn planter. 80c Crank Seeder, Sows wheat, oats and grass seed 4 to 10 acres an hour. Five other styles. Send for catalogue.

Send for Our Catalogue It has 432 pages, size 9x11 inches. Postage is 15c, but if you will cut this ad out and send it to us we will mail the catalog FREE. MARVIN SMITH CO., 55-57-59 N. Jefferson St., CHICAGO, ILL.

Please mention Bee Journal when writing.

Tennessee Queens.

Daughters of Select Imported Italian, Select long-tongued (Moore's), and Select, Straight 5-band Queens. Bred 3¼ miles apart, and mated to select drones. No bees owned within 2½ miles; none impure within 3, and but few within 5 miles. No disease. 30 years' experience. WARRANTED QUEENS, 75 cents each; TESTED, $1 50 each. Discount on large orders.

Contracts with dealers a specialty. Discount after July 1st

Send for circular.

JOHN M. DAVIS,
9A26t SPRING HILL, TENN.

Please mention Bee Journal when writing

Incubator Triumph of the Age.—It was Chas. A. Cyphers, president of the well-known Cyphers Incubator Co., who, after 8 years of study and experimenting, discovered "the diffusive principle" in successful artificial incubation. By means of Mr. Cyphers' great discovery, as embodied in the incubator bearing his name, the natural moisture within the egg is conserved, answering all purposes, the chicks coming larger and stronger because hatched "in nature's way," and under all ordinary conditions no thought or attention whatever need be given to the heretofore troublesome and often disastrous "moisture question," or to the proper ventilation of the hatching chamber.

(Cyphers incubators, as manufactured to-day, are practically automatic, being self-ventilating, self-regulating, and requiring no supplied moisture. All the attention they need is 5 minutes in the morning and 5 minutes in the evening to fill the lamp, trim the wick and turn the eggs. The incubator does the rest and does it perfectly.)

Mr. Cyphers built his first incubators with his own hands, wood work, metal work and all. To-day—only 6 days later—the Cyphers Company occupies a mammoth plant at Buffalo, N. Y., employing over 300 persons, and operates its own stores in New York, Boston and Chicago. The company also has agencies and distributing depots in the principal cities of every State in the Union and in Canada, Europe, Australia, New Zealand, British South Africa, South America, Mexico, the Hawaiian Islands and the Orient.

The 7th annual catalog of the Cyphers Company, entitled, "How to Make Money with Poultry and Incubators," is unquestionably the most valuable book of its kind ever published. It contains 12 special chapters from the pens of experts, covering every branch of profitable poultry-keeping. Heretofore, this annual Catalog and Guide has been sold at 15 cents per copy, although worth many times the amount, but this latest and most valuable edition will be mailed free, prepaid, during the next 30 days, to all interested persons who will write for it and name the American Bee Journal. Address, Cyphers Incubator Company, Executive Offices, Buffalo, N. Y.

Mention this Paper.

EVERGREENS

Hardy sorts, Nursery grown, for windbreaks, ornament and hedges. Prepaid, $1 to $10 per 100—50 Great Bargains to select from. Write at once for free Catalogue and Bargain Sheet. Local Agents wanted.

D. Hill, Evergreen Specialist, **Dundee, Ill.**

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up to that time, and seemed to be strong, and very few bees are dying so far. I winter the bees on the summer stands, and work for comb honey altogether, and natural swarming. Last season I had 17 new swarms, and did not lose a swarm or a queen from spring until packing time for winter. I think that a record-breaker, don't you?

The following is a list of the officers of the South Dakota Bee-Keepers' Association for this year: President, G. L. Dibble; Vice-President, L. A. Syverud; Secretary, J. M. Hobbs, of Yankton; and General Manager, J. J. Duffack. District Vice-Presidents: H. Schell, P. N. Cross, G. L. Chamberlain, L. A. Syverud, and G. L. Dibble.

J. M. HOBBS, *Sec.*

Yankton Co., S. Dak.

Report for the Season of 1902.

I started last season with 3 colonies in chaff hives, and although it rained nearly every day in June I increased to 6 colonies, and took 260 pounds of honey, which I sold for 15 cents, besides the sections that were not well filled, which we used ourselves.

The main crop was buckwheat, and a lot of fall aster honey, which was as clear as water.

DEAN LAUDENSLAYER.

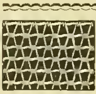
Clearfield Co., Pa., Feb. 4.

Cellar-Wintering of Bees.

Is it desirable, when a favorable day comes, to take the bees out of the cellar in winter and then return them after a flight? Years ago I wintered my bees in a very dry cellar, where the temperature run from 30 up to 60 degrees, Fahr., and I wintered bees in there pretty well. I gave them a flight as soon as possible. One year (I don't remember which year it was) I thought I would try to answer this question, and left two colonies in the cellar; the rest I gave a flight, and after I got them on the summer stands they were very weak, and did not come out of the hive. I took them into a warm room and they crawled out on the floor, but could not fly. They looked like a queen full of eggs. About a week after that every one was dead. I believe if I had taken them out with the others they would have kept all right.

Here is my guess: With the uneven temperature and very dry cellar they felt uneasy for a long time, and ate more than they should, got too full, and could not get rid of it.

In 1896 I put the bees into the cellar Nov. 22, where I could keep the temperature between 42 and 46 degrees, and tried this question again. I took a strong colony whose weight was 58 pounds. March 2 we had a nice wind; that day I got the colony out of



FENCE! *STRONGEST MADE.* Bull Strong, Chicken-Tight. Sold to the Farmer at Wholesale Prices. Fully Warranted. Catalog Free.
COILED SPRING FENCE CO.
Box 89 Winchester, Indiana, U. S. A.

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A BIG SNAP IN BUGGIES!

A well built, finely finished top buggy with oil tempered springs. Has all the style shown by rigs costing twice as much. You can't beat it in style or equal in price. Write for price and agency plan.
ECONOMY BUGGY CO.,
Box A 53, Cincinnati, O.

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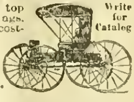

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HIGGINSVILLE BEE-SUPPLIES.

We have received a car-load of those unique supplies. These goods are equal to if not the best on the market. Give us a trial order. We are also agents for the PROGRESSIVE BEE-KEEPER, price, 50 cents per year. Send your orders and subscriptions to us. We sell at factory prices. FRANK L. ATEN.
Cotalog Free. Round Rock, Tex.

BARGAINS IN SEEDS

Choice kinds of Vegetable and Flower Seeds at **2 cents per Packet.** Flower Plants, 5 cents each. Many choice novelties. Don't buy until you see our **New Catalogue. Mailed FREE** if you mention this paper.
IOWA SEED CO., DES MOINES, IOWA.

Do It Quick!

$2.50 for **$1.00**

Sample Free

The Modern Farmer and Busy Bee, $50c;
National Fruit-Grower, 50c:
The American Poultry Journal, 50c:
Gleanings in Bee-Culture, $1.00;
ALL FOR $1.00

The Modern Farmer
St. Joseph, Mo.

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The Rural Californian

Tells all about Bees in California. The yields and Price of Honey; the Pasturage and Nectar-Producing Plants; the Bee-Ranches and how they are conducted. In fact the entire field is fully covered by an expert bee-man. Besides this the paper also tells you all about California Agriculture and Horticulture. $1.00 per year; 6 months, 50 cents. Sample copies, 10 cents.

THE RURAL CALIFORNIAN,
218 North Main Street, - LOS ANGELES, CAL.

The American Poultry Journal

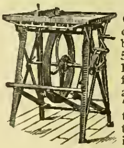
325 Dearborn Street, CHICAGO, ILL.

A Journal that is over a quarter of a century old and is still growing must possess intrinsic merit of its own, and its field must be a valuable one. Such is the

American Poultry Journal.

50 cents a Year. Mention the Bee Journal.

BARNES' FOOT POWER MACHINERY



Read what J. I. PARENT, of Charlton, N. Y., says: "We cut with one of your Combined Machines, last winter, 50 chaff hives with 7-in. cap, 100 honey racks, 500 brood-frames, 2,000 honey boxes, and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make, and we expect to do it with this Saw. It will do all you say it will." Catalog and price-list free.
Address, W. F. & JOHN BARNES,
995 Ruby St., Rockford, Ill.

Magic Rheumatic Cure

It absolutely does cure. It is not a CHEAP remedy, but it is a CHEAP cure. Mark the distinction! There are a thousand remedies to one cure. This is a cure. It costs $2.00 a bottle, and is worth $20.00 to any sufferer. Sold only by our authorized agents or direct of us. Send for circular. Agents wanted.

MAGIC CURE CO., Chicago.
R. 331—315 DEARBORN ST.

The Danz. Hive—
The Comb Honey Hive.

We sell it. We are authorized jobbing agents for THE A. I. ROOT CO., for Michigan. Send us a list of the goods you want for this season, and let us quote you prices. Beeswax wanted. Send for catalog. H. M. HUNT & SON,
10A17t BELL BRANCH, MICH.

BOYS WE WANT WORKERS

Boys, Girls, old and young alike, make money working for us. We furnish capital to start you in business. Send us 10c stamps or silver for full instructions and a line of samples to work with. DRAPER PUBLISHING CO., Chicago, Ill.

the cellar, and the weight was 53½ pounds. They had a good flight, and the colony was strong. I left them until night, and the weight was 52 pounds. On April 4 I put the bees on the summer stands, and their weight was 44 pounds; so it lost 14 pounds, or 8 pounds in one month after its flight; and the rest consumed about 7 pounds during the whole winter, and came out in good shape, too. Their cellar is under the house, with a warm room on top; the cellar is very damp so the water stands on the walls, still the bees winter in there all right. For example, last winter I put in 64 colonies, kept them in 4½ months, and 62 came out in very good shape; 2 were weak, and those 2 were Italians; they quit breeding so early in the fall that the most of them died from old age.

Now, somebody might say that under the house is not a good place, the bees get disturbed too much; but that is not so with me, because I am very particular with my bees. Sometimes I go down with a light and look over them, and the bees hang there as if they were sleeping. I winter them without hive-bottoms.

If we want to winter our bees well, let them have good, healthy stores and strong colonies, a wet cellar, and an even temperature, then we do not need to be afraid to winter our bees for five months without giving them any flight or fresh air.

I would like to shake hands with Mr. Leupold (page 109). I, too, have been working among bees since childhood, nearly 53 years now. I had more than 20 colonies in straw hives when I was 5 years old. I can do the same trick that he can; but I take a dead colony. H. B. STUMPE.

Stephenson Co., Ill.

To make cows pay, use Sharples Cream Separators Book Business Dairying& Cat.212 free.W.Chester.Pa

CONVENTION NOTICES.

New York.—The annual meeting of the Oswego County Bee-Keepers' Association will be held at Fulton, N. Y., Saturday, March 7, 1903. Prof. Frank Benton will be present and address the meeting. An interesting program is being prepared, and all persons interested in bees are cordially invited to be present.

MORTIMER STEVENS, Pres.

CHAS. B. ALLEN, Sec.

New York.—A series of Bee Keepers' Institutes will be held in the State of New York as follows: Canandaigua, March 2 and 3; Romulus, March 4; Auburn, March 5; Cortland, March 6; Fulton, March 7; Syracuse, March 9 and 10; and Amsterdam March 11.

Prof. Frank Benton, Apicultural Investigator, furnished by the United States Department of Agriculture at the expense of the Bureau of Institutes of the State Department of Agriculture, will address the meetings.

The New York State Association of Bee-Keepers' Societies will hold its annual meeting at Syracuse, March 10, at 10 o'clock a.m., in the City Hall. Prof. Benton and other prominent bee-men have informed us of their intention to attend this meeting, and a profitable and interesting session is in store for those who attend. Special rates have been secured for entertainment at the Manhattan Hotel, Fayette St., at $1.25 per day. C. B. HOWARD, Sec.

A Feeler.—Attention, bee-keepers of Missouri! Let us organize a Missouri State Bee-Keepers' Association. What do you say? I move we elect Mr. John Nebel, of High Hill, Mo., president pro tem. Who will second the motion?

Other motions in order will be to elect a secretary and treasurer, and other officers that may be needed, and then adopt a constitution and by-laws, and proceed to business generally.

This "feeler" goes to about 200 or more bee-keepers who are readers of bee-papers. If you appreciate it, please send me a dime to help bear expenses, and your name will be recorded as a charter member. If I get more than enough to pay expenses I will turn the balance into the hands of the treasurer, whoever you may elect. If I do not get enough to pay expenses I will tell the Association all about it, and they can adopt any measures they please.

Wakenda, Mo. Yours truly, W. T. CARY.

The above "feeler" was scattered over the State of Missouri about two or three weeks ago, as an open circular letter. I have received 32 replies containing money or stamps, and encouraging words. Fourteen of them seconded my motion for John Nebel for president pro tem, and two nominations were made for secretary and treasurer. Other replies will be gladly received, and your names enrolled as charter members for 10 cents, until further notice is given. In your replies please vote for president pro tem, and nominate candidates for secretary and treasurer. W. T. CARY.

New York — The annual meeting of the New York State Association of Bee Keepers' Societies will be held in the City Hall, Syracuse, N. Y., commencing Monday, March 9, 1903, at 7 p. m., following the Onondaga Co. Bee-Keepers' meeting and institute which is to be held at the same place during the day. Program: Monday, 8 p.m., "In Search of New Bees—Reminiscence," Prof. Frank Benton; Tuesday, March 10, 9 a. m., Secretary and Treasurer's report, C. B. Howard; President's annual message, W. F. Marks; Discussion, opened by Dr. C. L. Parker; "Objects to be sought and methods to be employed toward increasing the usefulness and efficiency of our organization," O. L. Hershiser, F. Greiner, Chas. Stewart; Question-Box; Appointment of Committees; Adjournment for dinner.

1:30 p.m., presentment of credentials and payment of dues by delegates; Election of officers; Reports of committees; Miscellaneous business; "Breeding bees for the harvest," Prof. Frank Benton; Discussion, opened by N. L. Stevens; Reports by State Bee Inspectors; Question-Box; 5 p.m., Adjournment.

Prof. Frank Benton is the Apicultural Investigator for, and is furnished by, the U. S. Dept. of Agriculture, and his expenses are paid by the State Bureau of Institutes.

Special rates have been secured for entertainment at the Manhattan Hotel, Fayette Street, $1.25 per day. C. B. Howard, Sec.

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HONEY AND BEESWAX
MARKET QUOTATIONS.

CHICAGO, Feb. 7.—The market is in rather an unsettled state. The offerings of late have been numerous, and there is a tendency towards lower prices, owing to the supply being much larger than expected at this season of the year. The fancy grades of white will sell at 15@16c per pound, but anything below this grade is difficult to place at anything above 10@12c. Extracted honey is also easy, with the best grades of white obtainable at 7@8c, and ambers at 6@7c. Beeswax steady at 30c upon arrival.

R. A. BURNETT & Co.

ALBANY, N. Y., Feb. 20.—Honey demand quiet; receipts and stock light. Comb selling, light, 15c; mixed, 14@15c; dark, 13@14c. Extracted, dark, at 7@7½c. Beeswax firm, 30@32c.

H. R. WRIGHT.

KANSAS CITY, Feb. 21.—The demand for both comb and extracted honey is better, receipts light. We quote as follows: Extra fancy white comb, per case, $3.40; strictly No. 1, $3.30; No. 1 amber, $3@$3.25; No. 2, white and amber, $2.50. Extracted, white, per pound, 7c; amber, 6@6½c. Beeswax, 30c. C. C. CLEMONS & Co.

CINCINNATI, Feb 7—The demand for all kinds of honey has fallen off considerably in the last few weeks, owing to the many other sweets offered at this season of the year. Lower prices are no inducement to increase the consumption, as the demand is not there, and will not be until about the end of the month; consequently it is folly to offer at lower prices. We quote amber extracted in barrels at 5¾@6½c; white clover and basswood, 8@9½c. Fancy white comb honey, 16@17c; lower grades hard to sell at any price. Beeswax firm at 30c.

THE FRED W. MUTH Co.

NEW YORK, Jan. 23.—Demand for comb honey quiet on all grades, and prices show a downward tendency. Supply quite sufficient to meet demand, if not more so. We quote fancy white at 15c; No. 1, at 14c; No. 2, at from 12@13c; dark and buckwheat, at from 11@12c.

Extracted also quiet with abundant supplies with the exception of white clover. We quote white at 7c; amber at 6½c, and dark at 6c. Common in barrels from 60@65c per gallon.

Beeswax firm at from 29@30c.

HILDRETH & SEGELKEN.

CINCINNATI, Feb. 7.—The comb honey market continues to be draggy and hardly any demand and therefore prices have weakened. Fancy white clover comb sells for 15@15½c; for amber there is no demand. The market for extracted is fair and prices rule as follows: Amber, 5¼@5½c, by the barrel; in cans it brings a little more; alfalfa, 7½c; white clover, 8@8½c. Beeswax, 28@30c. C. H. W. WEBER.

SAN FRANCISCO, Jan. 14.—White comb honey, 11½@12½c; light amber, 10@11c; dark, 5@6½c. Extracted, white, 6@6½c; light amber, 5@5¼c; amber, 4@4½c. Beeswax, good to choice, light, 26@27½c; strictly fancy light, 29@30c.

The country merchant, representative of trade interests, estimates "entire stock of honey of 1902 in the State at 15 cars," worth 5¾@6c per pound at primary points, subject to a $1.10 freight-rate to the East.

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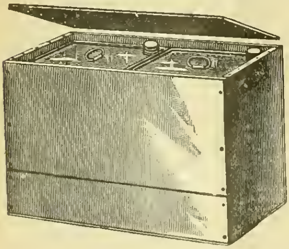

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R. C. AIKIN.

AMERICAN BEE JOURNAL

43d Year. CHICAGO, ILL., MARCH 12, 1903. No. 11.

A QUARTET OF APIARIES

(See next page.)

Apiary of G. H. Wells, of Cass Co., Iowa.

Apiary of C. W. Virgin, of Stearns Co., Minn.

Apiary of Wm. W. Green, of Cook Co., Ill.

Apiary of Peter Gallee, of Ray Co., Mo.

THE AMERICAN BEE JOURNAL

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DEPT. EDITORS,
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IMPORTANT NOTICES.

The Subscription Price of this Journal is $1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

The Wrapper-Label Date of this paper indicates the end of the month to which your subscription is paid. For instance, "dec03" on your label shows that it is paid to the end of December, 1903.

Subscription Receipts.—We do not send a receipt for money sent us to pay subscription, but change the date on your wrapper-label, which shows you that the money has been received and credited.

Advertising Rates will be given upon application.

Weekly Budget.

REV. JAMES M. SMITH, of Santa Barbara Co., Calif., writing us Feb. 28, said:

"My home was burned lately—total loss. The family were all away camping. My file of American Bee Journals and every book were burned."

We regret exceedingly to learn of Mr. Smith's heavy loss. Of course, many things undoubtedly held sacred as well as of pecuniary value are lost. Only those who have passed through such a "clean sweep" know anything about it. We hope but few will be called on to experience it.

Apiary of Wm. W. Green.

The picture shows my hobby at the height of its prosperity last summer—not high enough to be alarming—with "Yours truly" standing beside his crack colony.

My two little assistants, aged 8 and 9, show rather indistinctly near the edges of the picture.

I started keeping bees three seasons ago, purely for pleasure and recreation, and, I must say, that I have attained what I sought. Madam says she would like some honey, if you please, but I get all my pay before the crop comes off. Rather think *my* pay was the larger last year.

I have 26 colonies in a rather narrow city back-yard—whose limit will be about 36—and run for extracted honey, using Jumbo 10-frame hives (Draper barns)—and could not be induced to change for smaller. My field is very poor, one-half being Lake Michigan, and the other half so sandy that its product is small. The poor field brings me one blessing, however—no foul brood within reach of my bees.

Being in the game for pleasure, I have experimented a good deal, mostly with the different races of bees. Last year I had pure Italians, blacks, and Cyprian queens Carniolan mated. So far the latter have come out the best, with Italians second. My data is as yet, however, too limited to be conclusive. One could not ask for a better bee than the Cyprio-Carniolan, first cross. The queens are very prolific, the bees tremendous workers, large, gentle, and uniformly marked, being distinguishable from three-banded leather-colored Italians. In the next generation the uniformity disappears, pure black bees appearing regardless of the mating of the young queen.

My only original feature is that I number the queens and not the hives. Each hive has a brass card-holder tacked on it with a numbered water-proof card therein, and when the queen changes her abode the card goes with her.

I clip all my queens, principally for the purpose of "branding" them. I am not troubled with much swarming, using such large hives, although some of my best queens—Cyprio-Carniolans—have needed more than one hive-body for a brood-chamber.

It is perhaps needless to add that the American Bee Journal has added greatly to the pleasure I have obtained from bee-keeping. WM. W. GREEN.

Cook Co., Ill.

Apiary of C. W. Virgin.

Although my apiary is not very large, there is a whole lot of room for it to grow.

It was started from a swarm of bees found in the woods Oct. 26, 1901—the old empty hive which is on the right. They were taken home, kept in the cellar all winter, swarmed out twice, and the remaining swarm was then put into a hive.

From the first colony on the left I got 20 pounds of surplus; from the next enough stores to winter on; the third, and last colony, I have had to feed.

I have several more colonies that I found in the woods last fall, all in the cellar and doing nicely.

I got some of them home too late in the fall to feed; I don't know whether they have enough to winter on or not. I can see a few of the bees, and a little of the comb through a hole, but can not get in to them without splitting the stumps, and I don't want to do that until in the spring. C. W. VIRGIN.

Stearns Co., Minn.

Apiary of Peter Gallee.

One afternoon, in 1896, when Peter Gallee, with a friend, returned from a stroll to his home his wife met him and said she was glad he had come, for she had caught a swarm of bees, and she wished him to put them in a box or something right away, else they might go off. Peter said, "That is best; let them go off," for he would not have anything to do with them. His friend said he could hive them, so they were put into a box—a colony of nice yellow bees. They swarmed, and the swarm was boxed. Now, Mr. Gallee got interested in the bees, and thought if he were going to keep bees and do any good with them they should be kept in something more convenient to handle, so he got some Langstroth hives and commenced to handle bees in a practical way, and produced section honey. The bees kept increasing so that other hives were needed, and he now uses lock-cornered hives with 8 Hoffman frames. Last year he had 35 colonies, spring count, and produced 2200 pounds of comb honey besides the increase. He has now about 65 colonies.

He winters on the summer stands by grouping the hives in twos, leaving the fronts open, but the sides, ends and tops are covered with straw, hay or grass, as is most handy at time of packing, the whole kept in place with four lath frames fastened with stakes and ties, with shade-boards on top to carry off the water. He sees that each colony has enough stores until spring, when he looks to their condition, and helps with a little feed, if needed. By this method very few colonies are lost in wintering, and what is very interesting is this: The colonies seem to get through with a small amount of stores, and we generally hear the first honey of the season is sold from this apiary in his district.

Mr. Gallee does not send off for queens, his apiary being from the original stock, excepting a stray swarm or two which may have come into his yard, so his queens are reared under the supersedure or else the swarming impulse.

His apiary is on the Missouri River, and he thinks if he had forage all around his bees would do still better.

Has any one an apiary started with one swarm of black bees, and not helped with queens from other apiaries to equal, or be better, than Mr. Peter Gallee's apiary?

Ray Co., Mo. JOHN S. SEMMENS.

The Apiary of G. H. Wells.

My son took the picture of the "Diamond Apiary" and me. Only 19 colonies appear, while we have 21, and on the most of them the diamonds show, being put on with vermilion paint, and each hive is numbered with black paint inside of the diamond.

We began to study the bee-business two years ago, starting with one good colony badly hived, and one very poor one in a square box, so that both had to be transferred into good hives, which I did with the help of an old man that had handled bees for some years, but had not studied the business, so, of course, I have made some big mistakes; but I have tried to learn what I could by reading the bee-papers and books. One of the big mistakes I made was to take a very fine queen out of her hive (the colony had been hived June 2, and had given me 57 pounds of nice comb honey), and put in a young queen that I got from Texas, and she died, or was not to be found the next May. So I learned that when I have a good queen, and she is doing well, to let her alone, whether she has one band or three, although I have nine nice 3-banded queens.

Last year the bees in this vicinity did no good except in increase. I bought several young colonies, and at the close of the swarming-time we had 26, but we had to double them up because they did not build comb enough to hold syrup to winter on, so by putting two colonies together will be able to pull through. I fed them about 200 pounds of sugar, and then put them in the back chamber and darkened the window, but left it so I can give them plenty of air, and they seem to be doing nicely so far.

I think I would better raise them up from the bottom-board by putting a ⅞ strip under the hive on three sides, and then put queen-guards in front to make sure the mice will not get in. Better be safe. G. H. WELLS.

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ESTABLISHT IN 1861
AMERICAN BEE JOURNAL
THE OLDEST BEE-PAPER IN AMERICA

43d YEAR. CHICAGO, ILL., MARCH 12, 1903. No. 11.

Editorial.

An Illinois Foul Brood Law is what the bee-keepers of this State are endeavoring to have passed during the present session of the Legislature. Referring to the matter, Secretary Moore, of the Chicago-Northwestern Bee-Keepers' Association, has this to say:

PARK RIDGE, ILL., Feb. 16, 1903.

DEAR BEE-KEEPER:—

The time has arrived when we can reach our *representatives* at Springfield and get a *Foul Brood Law* enacted. The Secretary of the Chicago-Northwestern Bee-Keepers' Association is in personal touch with more than half a dozen of the members of the Legislature now in session. About 70 of the members are from the city of Chicago and Cook County, and can be personally reached. It will be necessary to raise some money to pay postage and other necessary expenses. Every bee-keeper in Illinois (several thousand) must be reached by mail. The matter must be argued before committees of Senate and House. About $300 may be needed to cover necessary expenses. Subscriptions so far are:

George W. York, $25; Herman F. Moore, $10; H. M. Arnd, $5; Peter N. Duff, $10; Mr. and Mrs. Frank Brown, $5; Dr. C. C. Miller, $5; J. A. Highet, $1; Mrs. N. L. Stow, $5; C. F. Kannenberg, $5; G. E. Purple, $5. The subscriptions will be used only to pay necessary expenses. The money will be expended by the executive committee of the Chicago-Northwestern Bee-Keepers' Association. The Association shall be custodian of the funds, and any surplus over what is needed to get the passage of the law will be placed in the treasury of the Association.

Now, send in your names and money, for we must have a *foul brood law* in Illinois, and now is our opportunity. The writer has had the honor of the friendship of the Hon. Henry W. Austin, of Oak Park—a member of the present Illinois House—for some years, and he is personally interested in the passage of this law.

Any one knowing of a member of either Senate or House who is interested in bees, will confer a favor by notifying the undersigned.

It will be well to have a number of the prominent bee-keepers all over this great State present when our Bill comes before the committees of the Senate and House. If only one or two were present they might think we did not amount to much. Watch the American Bee Journal, and we will keep you informed.

The Bill will go before the Legislature as a petition from the Illinois State and the Chicago-Northwestern Associations jointly. We ask an annual appropriation of $1000 in our Bill.

Let all the bee-keepers in Illinois rally, and *we shall have the law* we so much need. *Nothing can prevent it* but the *indifference of those most interested*. Remember, you must act promptly, as the Legislature is now in session, and committees have been appointed.

Since the writing of the above the chairman has been to Springfield and addressed both the Senate and House Appropriations Committees, to which our Bills were referred. Both committees gave us a very respectful hearing, and the House committee carried a motion to report it favorably to the House, and recommend that it do pass. The Senate committee had yet to act at the time the writer left Springfield, but it seems certain that they are favorably disposed to our Bill.

Now, any of the Illinois readers of the American Bee Journal, who can reach a member of either House or Senate before our Bill comes to a vote, please do so, as we need all the help we can get.

Pres. Smith, Sec. Stone, and Treas. Becker, of the Illinois State Bee-Keepers' Association, did some hard work before the committees. Mr. Stone had a hive, and Mr. Smith a frame of foul brood comb.

HERMAN F. MOORE,
Chairman of Foul Brood Committee,
Chicago-Northwestern Bee-Keepers' Association.

March 6, 1903.

◆

Carpet-Grass (*Lippia nodiflora*) is lauded in Gleanings in Bee-Culture as a honey-plant of great value. Its name is suggestive of its appearance, and it flourishes where without it the ground would be bare. Stock eat it. It flourishes in nearly all parts of the West Indies. It has been lately introduced in the Bahamas, and is now the leading honey-plant there. W. K. Morrison thinks that sufficient perseverance would succeed in establishing it on the vast sandy wastes known as the piney woods of Florida, and Editor Root waxes eloquent after the following fashion:

> If the sandy wastes in Florida could be covered with such a mass of green verdure, with its tiny little flowers so redolent of precious sweetness, what a transformation would be made! Verily, the desert would become a garden of Eden; and the happy hum of bees would gladden the hearts of many thousands of bee-keepers.

◆

Giving Bees a Cleansing Flight is advocated by G. A. Deadman in the Canadian Bee Journal. He favors taking them out of the cellar and giving them a flight, say for this locality about the first fine day between the 5th and 10th of April, or possibly before if any prospects of early spring, and then putting them back again for perhaps two weeks or so. One object of this is to start brood-rearing, for bees do little at brood-rearing so long as they remain in the cellar. To be sure, they will start brood-rearing just as early if taken out at the time he suggests and left out; but he argues that during that two weeks' time many bees will be lost by flying when too cold for the bees to get back safely to the hives.

An item that Mr. Deadman does not mention, although no doubt well aware of it, is that the evils of confinement increase toward spring in something like a geometrical ratio, and bees will suffer more during the last two weeks than perhaps during the first two months. If they can be relieved by a cleansing flight, and then do as well in the cellar afterward without any evil effects from that flight, there will be a gain.

But it has been pretty generally believed that bees thus returned to the cellar would be so uneasy that the evil effect of this would overbalance all the good results. If a large number of bee-keepers who cellar their bees will this spring try the experiment of taking out and returning a certain number of colonies, and then comparing their after welfare with that of the colonies remaining in the cellar till later, it will go a long way toward settling the question.

◆

Testing Honey-Barrels.—To test honey-barrels before waxing, a bicycle-pump is recommended in Gleanings in Bee-Culture instead of blowing into the barrel with the breath.

◆

Remedy for Laying Workers.—C. M. Aarons, in Gleanings in Bee-Culture, recommends that the larva be removed from one of the queen-cells started, and a worker-larva from a fertile queen put in its place. From this a queen will be reared. It is claimed by some that a virgin queen, when first hatched, is kindly received in any colony, even where a laying queen is present, and only when the virgin becomes a day or so old does jealousy arise between her and the reigning queen. If that be true, a good deal of time would be saved by giving the laying-worker colony a just-hatched virgin—if you have one.

◆

Bee-Keepers Need the Scientist, says Arthur C. Miller in the Bee-Keepers' Review. It is too often the case that a bee-keeper of very limited experience puts that limited experience against the conclusions of the ablest scientist, rating the investigations of the scientist as something misty and unreal. To such a person the following wise words of Mr. Miller may be commended:

> The scientist differs from the ordinary observer and student in degree rather than in method. The former proceeds with caution; testing, trying and weighing each step of his experiments; makes his observations as abundant as possible; compares the results of his work with those of others, when possible; and thus deduces from these what he believes to be "laws." The ordinary observer, on the contrary, proceeds less methodically; is content with less exhaustive experiments, and decides off-hand. But between the two extremes there are so many shades that he is a reckless individual who will say, "Here is the dividing line." So, let the scoffer beware, for he, himself, may be a truer scientist than the man at whom he scoffs.

Convention Proceedings.

Chicago-Northwestern Convention.

Report of the Chicago-Northwestern Bee-Keepers' Convention, held in Chicago, Dec. 3 and 4, 1902.

BY OUR OWN SHORTHAND REPORTER.

(Continued from page 149.)

JOINING THE NATIONAL IN A BODY.

Pres. York—While the tellers are counting the ballots we may as well proceed. What about joining the National in a body?

Dr. Miller—I move that this Association as a body unite with the National.

The motion was seconded, put, and carried.

Pres. York—The secretary tells me that this is Dr. Miller's time for an address. I don't know whether he brought it with him or not. I know he brought his wife!

Dr. Miller—I made my address several times this afternoon, and probably will repeat it before night.

Pres. York—We will take up the next question.

SQUARE OR TALL SECTIONS—WHICH?

"Which is preferable, square or tall sections?"

Pres. York—I think Mr. Huber Root could answer that pretty well, judging from what he knows about them.

Mr. Root—I don't know; it is a hard question to decide at all. I should prefer to let each one decide that for himself. I don't think that one man or one company of men could decide that for anybody. I think half would want square and half would want tall. It doesn't seem to me that we can decide that without an actual test.

Pres. York—How about Missouri, Mr. Leahy? Do they care anything about it down there?

Mr. Leahy—Unfortunately for Missouri we haven't had any honey this year. We sell more of the square sections than any other kind, but I attribute that largely to the hives. In the different States surrounding us they are fitted already for the square sections. I favor the taller sections myself, providing that they hold about the same as the 4¼x4¼x1⅞ sections. The Baldwins, in Missouri, have been large producers of comb honey. They use a section 4¼x5. They get a little more for it, because people who buy it think they are getting a little more for their money. It is a larger section. I believe that we are drifting toward the tall section. My ideal section is the 4x5. I would recommend that size. 4x5x1⅜ is my idea of the ideal section. Then there are many that won't like to change their supers for the benefit that will come from a tall section. I do not like a real narrow, tall section. I never heard of any one that liked the 3⅝x5, although some buy them.

Mr. Clarke—I would like to get an idea from some of those who have been using 4x5 sections in this locality, as to how their sections have been filled this season. This was a season that they can be tested. How many unfinished sections have they had this year? I mean in a locality where there has been a poor honey crop. It has been a wet season, and a good testing season for that.

Mr. Root—I just wish to say that I agree with everything that Mr. Leahy has said, and I think the 4x5 sections are coming up, although we sell more 4¼ square sections. Every man to whom we sent 4x5 sections sends in more orders, and I don't know of any one who ever used the 4x5 section who ever went back to the square, and that's taking the voice of the whole people, and not only a few.

Mr. Whitney—I have used both kinds. Two years ago I had an equal number of each, 4x5 and 4¼ square. The grocerymen liked the 4x5, but when I get out a section of honey and put it on a plate, and submit it to the ladies, they say, "Give us the square section." They thought it looked better on the table than the 4x5. They weighed substantially alike. Of course, the 4x5 looks more like a window-pane. From all we see, it looks as if there was more honey in it, and the grocerymen like it better because they think the tall sections sell easier, perhaps, and they can make a fraction of a cent per pound more. I think they fill just about as the 4¼ square, no better I think.

Mr. Niver—I have been having quite an experience in that line in the last two months, buying honey up in Wisconsin. There is a transition state up there as to what was the preferred section, how they are going to change their supers. I talked it over with a good many bee-keepers, and tried to figure out some kind of a way. How are you going to do it? 4x5 sections will not fit their supers; 3⅝x5 will, five rows of them; four rows of 3¾x4¾x1½ is what we use in New York. They only fill a fancy section, weigh just about ¾ of a pound. That's what our idea is to get. The reason for that was, that it made an even 15 cents at the price it was then at retail. We were trying to work for the groceryman. We believed that he was our best friend, and we should work to get him suited in the best way to retail. We sold these sections for 12 cents, and he retailed them at 15 cents each. We never sold by the pound. I don't believe in that kind of work. That made our old supers so that we could use them. If you use any other size than 4x5 you have to put in blocks or wedges at the end, because it won't fit your supers, and it is a little difficult to figure and get them just right to suit everybody; but I think that 4¼x4¼ are away back, especially if bee-keepers want to get to the tall sections, because it seems the fashion is running that way.

Mr. Wilcox—There is just one thing in Mr. Niver's remarks that I would notice. I have not had enough experience with the two in comparison to know which is the better, but the suggestion that he produces a ¾-pound section, one well filled for the general market, is something worth knowing. If any great number do that it is quite possible the groceryman will seek it, and in time there will be a greater demand for that than there will be for an honest pound section, because they can sell that for a pound section. I am afaid if they do that they will either force those who produce honest pounds to come to the ¾ section, and the public will understand the facts, and the advantage gained will be lost. The price will be adjusted accordingly. At the present time we have the 4¼, and it has been the standard. When it was first brought forward by A. I. Root it was an honest pound, and, properly filled, it was. It has stood better than any other could, and I really believe that it is entirely satisfactory to the honest trade to-day, and if I should attempt to sell a 14-ounce section, or a 12-ounce section, and have it called a pound, I am afraid I would lose customers. I know there is somewhat of a demand among grocerymen for something that is a fraction short, and they want to buy by the pound and sell by the piece. It is rarely that they find fault with 15 ounces to the pound—15 ounces to the piece, if you please.

Mr. Niver—We once had a two-pound section, and everybody used it, and there was quite a kick when we got it down to one pound. I don't know but an honest ¾ is just as honest as an honest pound. It is all the same. There is no pretension made in any section. When you come to the retailer he says, "Take your choice." He don't say, "Take a pound." It is just as honest to sell the man's ¾-pound section, and the grocers think they can make more money out of their pieces. This question of dishonesty doesn't "cut any ice" when selling by the piece. If a man says they are all one pound, and they are ¾ of a pound, that is deception. Anybody can find it out. That old cry for an honest pound is like the political cry for an honest dollar.

Dr. Miller—Why is it that the general trade, the grocers, etc., prefer to have honey average just a little less than a pound?

Mr. Leahy—A 4x5 section, to my notion, fits on the super better than any other to put them crosswise. There isn't so much sagging to the holder of the section, and one thing that I like about a 4x5 section is, that where the super is not deep enough it is very easy to add a piece of wood around it. Dr. Miller has asked the question why it is that retailers, grocerymen, wish to have a section weigh a little light. Any one who has handled comb honey in large quantities knows that a case of 24 sections that weigh 20 pounds net will sell quicker, and that the merchants will in some way or another get pay for 24 pounds, or he will charge just as much for a section that weighs 15 ounces as he would get for one that would weigh 16, only in the smaller way of selling a pound there is not much thought of an ounce. We make a great many cabbage crates, and if we can't make them up to weigh 23 pounds they don't want them, and I have asked them why they wanted them that way. "Well," they said, "we just make three pounds on the crate, and the cabbage is worth more than the crate." In other words, when they sell a crate of cabbage they want to substitute three pounds of wood in place of cabbage, and the market recognizes that 20 pounds is the weight of the crate, and they force the manufacturer to make them that way or he can go out of business, and we haven't been able to make them heavy enough, so they bought heavy Southern gum, and heavy yellow pine, and when the small merchant buys his crates of cabbage they put in the crate at 20 pounds; it is customary. I don't know which would be the best way to get a plan whereby the wholesaler and the retailer can steal a little honey from their customers. I don't know whether we ought to allow them to do it. I know some consciences say, "We don't put it up that way;" and some do, and sell it quick, and get just as much per pound for it, if not a little more.

Mr. Kluck—I remember well when we had the two-pound sections, and when the 4¼x4¼x2 section wasn't wanted. Now we have what we call the Ideal. That is 3⅝x5, and they hold 12 ounces of honey. I have found that I can sell all my Ideal sections before I can sell any pound sections. Ask them so much a piece, well filled, and all practically alike, and I sell them all first. So much a section is a little lower than a pound, and they will take them all first, and they will all be sold first, and I think the time has arrived that we can sell the Ideal a long ways before selling the others. It is almost impossible to sell a two-pound section on the market. They all want the Ideal section, and, to my notion, it is going to be the leading section of the day. It will exactly fit an 8-frame hive. There is no fixing around to these.

Mr. Root—I would like to ask if we sold none but the Ideal if they would sell quicker than a given number of the 4¼ square? Isn't it because he has two sizes, and one is a little cheaper than the other that he sells the other first?

Mr. Kluck—The other is cheaper in regard to section, but dearer in amount of honey, and they would sooner pay more for less honey than for the other.

Pres. York—For the Chicago market there is no preference in sections. You can not get any more for a tall section than for a square one. I would also say that the grocery trade in Chicago almost unanimously demands light weight. We can scarcely sell sections that weigh a full pound. The grocers want sections that weigh 21 to 22 pounds to the 24 sections. I am speaking from experience, not heresay. I know nearly all the grocers refuse to buy heavy weights. They want them light weights.

Dr. Miller—Do they buy by section or weight?

Pres. York—They buy weight and sell by the piece. They seem to have gotten onto that trick.

Mr. Kluck—How does the Ideal section sell?

Pres. York—They are all "ideal" in one way, but we have practically no 3⅝x5 sections here. I don't believe I ever saw more than one small shipment of that kind.

Mr. Baldridge—Is it not a fact that the dealers who have light-weight sections are trying to sell their cases by the case, instead of by weight?

Pres. York—Yes, I think that is true to a certain extent. They are trying to force them to buy by the case instead of by the pound. I received a market quotation from Kansas City, where the firm had changed the quotation from the pound to the case. It was the first notice I ever received from that commission firm. I could make a confession here about buying honey by the case wherein I was badly beaten, so I think I won't say anything further about it. I know I never want to buy any more that way.

Mr. Baldridge—I was in a wholesale house to-day, and they won't sell only by the case. They want us to pay for 21 pounds as much as we would pay for 23 or more.

Dr. Miller—There is one thing that was touched on in relation to this, and that is how to change from the supers we now use with a 4¼ to something that would take a tall section, and in what way would that change be made with the least expense. I think that all of the 4¼ supers can be changed to 4x5, but I don't think you meant that as a case.

Mr. Leahy—If you will take them, any one of you who have the 4¼x4¼ supers, and add a little rim at very slight expense, then you are ready for the 4x5 section. I don't believe there is any other way that you can change from the square to the tall section.

Mr. Niver—I would like to ask Mr. Leahy what width he would make his section?

Mr. Leahy—In speaking on that subject, I said my ideal section was 4x5x1⅜.

Mr. Baldridge—With or without separators?

Mr. Leahy—If I were going to use them myself I would use separators, but I know very prominent bee-keepers who use them without separators, and produce very nice honey by using starters. I would use them with separators, but not a 12-ounce section, but one about 15 ounces.

Dr. Miller—I think 4¼x5½ would bring you about the same as 4¼x4¼.

Mr. Wilcox—I would like to ask Dr. Miller, or any other man, would there be a gain or a loss in using a thin section as against a thicker one, that is, in the storage, in the cost of it?

Dr. Miller—I don't know; that's easier asked than answered. I try to think, too, to a considerable extent. I think there is a loss. I think it will cost you more to store the same weight of honey in the tall sections than it will in the square. I am pretty sure I can say that far. It will cost more in the first place, you will have to use more foundation; and when you make a thinner section it costs you more unless you go beyond a reasonable thickness.

Mr. Niver—On that point I have had a good deal of experience. In our locality we find that the thin section not to exceed 1¼, they will cap and finish far better than they will a thick section. Our 1¾ we threw out because they must draw it out and carry the honey. They will carry it much quicker and cap it quicker, that's the reason we changed to a tall section. The bulk of our honey comes in August, and in order to get them finished and fit to sell, and capped over, we found it was to our advantage to have a thinner section, because the bees would cap them so much quicker in a little cool weather; but it might not be so in other localities.

RESULT OF THE ELECTION.

The election of officers resulted as follows: President, George W. York; Vice-President, Mrs. N. L. Stow; and Secretary-Treasurer, Herman F. Moore.

(Continued next week.)

Contributed Articles.

Natural Swarming—Formation of Nuclei.

BY G. M. DOOLITTLE.

AGAIN, as my custom is during the long winter evenings, I have been going over the summer numbers of the bee-papers, to see if there was anything of importance missed in the hurried reading necessary during the summer months, when there is so much to do. In this reading I came across something from the pen of one of our most practical men, which seems more like the mistake of a novice than otherwise; but as it appeared in the American Bee Journal, and, so far as I have seen, has not been noticed, I think I will call attention to it, as it may help some beginner to form correct opinions, and know more of how natural swarming is conducted. What I allude to reads as follows:

"Thus [when a prime swarm issues], the able-bodied members of the hive, accompanied by the queen, leave for a new abode, allowing the young bees to remain and rear a queen. Usually the preparations for emigration are begun several days ahead by the rearing of queen-cells, and, when the bees leave, the young queen is about to hatch."

In nothing pertaining to bee-keeping have I spent more time and study than I have on natural swarming, and if the above is right all of my study has been in vain. I find it this way:

When the colony becomes inclined to swarm, the bees form embryo queen-cells in which the old or mother queen deposits an egg, one in each, that are to produce queens. In due time these eggs hatch into larvæ, which are fed royal jelly till the cells are sealed over. With the sealing of the first queen-cell (or cells) the swarm issues. This is the rule, and the exceptions are that the swarm sometimes issues on the day the eggs are laid in the queen-cells, or at about the time the first of the queen-larvæ hatch.

Only under conditions of unfavorable weather have I known this rule and the exceptions to be violated. With the sealing of the queen-cells we have seven days intervening before the young queen emerges, so that it could not possibly be said that "the young queen is about to hatch." The only time when it could be said, would be when the swarm was kept back by foul or unfavorable weather. Where any of the first queen-cells are sealed between one o'clock p.m. and six o'clock the next morning, a swarm may be expected during the next nine hours, if the day is favorable. Should there be high winds, cold or rain, the swarm will stay quietly in the old hive, and if such weather continues unabated for one, two, three, four, five, six or seven days, the colony *may* keep these queen-cells, and swarm on the first favorable day that comes; in which case should they be kept back from four to seven days, it might be truthfully said that the young queens were about to hatch or emerge from their cells. But not one swarm out of 500 ever issues under these circumstances, for by the time three or four foul days have occurred, the bees begin to feel poor from the lack of honey coming into the hive, give up swarming, tear down the queen-cells, and carry the embryo queens from the hive. But I have known, in one or two cases, the bees to preserve these young queens under unfavorable weather till the eighth day, when one or more of the young queens would emerge from their cells soon after the swarm had left; and one of these cases was this last summer, during which it rained 28 out of the 30 days in June, and 24 out of the 31 days in July. Then the writer says that the "young bees" are allowed to remain and rear a queen.

We often hear that the old bees go with the swarm, and the young bees remain in the old hive. This is as I find the matter: Bees of *all* ages, except those so young that they can not fly, accompany the swarm, and those of *all* ages stay with the old colony. Hundreds of times have I seen the ground in front of the hive covered with bees from six to ten hours old, all white and fuzzy, and too young to fly, that had tried to go with the swarm, and I never yet hived a swarm but what I could find hundreds of these young bees just a little older, enough so that they could barely fly, hanging in the cluster with the other bees, some of which were so old that their wings were nearly worn off. Nature makes no mistakes. If only old bees accompanied the swarm, these old bees would die of old age before any young bees would emerge from the cells in the newly-formed home, for where bees build their own combs, as they always do when combs are not supplied by man, it must be 23 to 24 days before many, if any, young bees appear, and this is more than half of the lifetime allotted to worker-bees at this season of the year.

DIFFERENCE BETWEEN PRIME AND FIRST SWARMS.

On page 539 (1902), I see I am asked to tell "what is the difference between a prime swarm and a first swarm." As I understand it, a prime swarm is a swarm that is perfect, or at its best at the time of issuing, or such a swarm as we have been talking about in this article, where the mother queen accompanies the swarm, which is composed of bees of all ages. A first swarm may be a *prime* swarm, and it may not be. In cases where the old or mother-queen dies in or about the swarming season, the bees will proceed to rear a queen from the brood left after her death, when, in due time, the first young queen will emerge from her cell and lead out the *first* swarm, which would be to all intents and purposes an *after-swarm*, except that it might have a larger number of bees with it than most after-swarms have.

If I wrote that a "prime swarm is often erroneously called a first swarm," such was done without fully considering the form of expression I was using. It should be expressed that a first swarm is often erroneously called a prime swarm.

FORMING NUCLEI.

On page 583 (1902), is an article from the pen of Dr. Miller, in which he conclusively proves that in his locality, and with his bees, it is possible to form nuclei from bees and combs taken from a colony having a laying queen, without taking any precaution as to keeping them from returning to their old home. In my former articles on this subject, I told just what had happened with me when I had tried such a plan, and I had supposed that bees would act the same with other people as they did with me, so, perhaps, I was too sweeping in my assertion, that were two bushels of bees taken from a colony having a laying queen, and placed in a new hive on combs of brood, without any precautions being taken, they would all stampede for home without leaving enough to form a decent nucleus. And that was just as I have found it, in conducting scores of experiments along this line, only the two bushels of bees were not generally used.

But last season gave me a surprise. As it rained nearly all the while during the month of June, when I must form my nuclei for queen-rearing, and not having enough queenless bees to form what I wanted, I, one day in my desperation, formed some nuclei in just the way Dr. Miller says he did, and plenty of bees staid for them to "hold the fort." This seemed so strange to me, in view of my former experience, that I set to thinking, and I remembered that it had been over a week since the bees had flown, and for this reason quite a share of the bees taken did not know of any other home than the place they were put in. Besides this, it kept cold and stormy so they could not fly under three days after I formed these nuclei, so that this added much to their disposition to stay "where put."

But later on, when the bees were flying every day, I tried again in the same way, and had the same difficulty that I always had, of going to the nucleus hives the next morning only to find the combs deserted, except a few very young, fuzzy bees, the most of which had emerged from the brood in the combs given them.

I am not positive, but the reading of Dr. Miller's article above referred to, looks as if he might have formed his colonies (if not nuclei) by taking bees from several colonies having queens, and putting them together to form new colonies. If he did this, I should expect them to stay much better, for where I wish bees taken from a colony having a laying queen to stay where I put them, I take the bees from several colonies, mix them all up, and then form a colony of these mixed bees (small or large), and the larger part of them will adhere to the combs of brood in the new location. This mixing process seems to disconcert them, causing them to be so confused that they forget their anxiety to get back home, until they become accustomed to the surrounding circumstances. Onondaga Co., N. Y.

No. 3—The Hive Problem—More About Size and Shape.

BY R. C. AIKIN.

THERE is no doubt in my mind as to the failure of the present form of hive to fill the bill in results. As I have shown in the two preceding articles, the regular Langstroth hive is not as fully suited to our needs as might be, for wintering it is too wide—or rather long—for its depth, and is not easy to contract or expand. However, I believe if bee-keepers would use either 6 or 7 frames to the chamber, filling out the remaining space with dummies or followers, then at all times outside of the harvest flow carry them two deep, that better results would be accomplished.

I have for several years advocated the 10-frame hive for this territory, doing so because the 8-frame hive was too small. I have not changed my mind in the least as to size except to favor even larger than the 10-frame; I now think that very often a 12 frame is not any too much. I consider the shape of the Langstroth hive as not satisfactory, because it must be too large in its top surface to get proper depth without getting the hive too big during the harvest, so as a compromise, and to continue the use of that hive, I doubled up, thereby getting depth without enlarging the super surface. It is more natural for the bees to have the depth about twice the width, in any event have the depth considerably more than width and length. The Langstroth frame is too long, but used as I have indicated, two sets deep, it is not so bad.

One reason why I am adopting the 8-frame width, is because its width approximates the proper proportion as to height when the hive is two stories high, or one story with 2 or 3 supers on A two-story Langstroth hive, whether the same depth is in brood-chambers or equivalent in supers or combination, is about 20 inches. If a little was cut off the end of the hive and put on its height, it would be almost ideal. With the hives of these proportions I am confident we can get better average filling of the supers, and there being but 24 sections instead of 28 they will be filled and ready to come off sooner. If one wants to keep supers on longer they can be raised and others put below, yet the travel over the finished sections raised to the top is reduced to a minimum. Still another advantage is that when a super is raised and a fresh one put under, work will be pushed more rapidly in the new one, and work going on freely in the super *always* lessens the crowding of the brood-chamber. If a colony can once be gotten to work in the super, we have in a very large degree gotten the control of that colony to keep down swarming, and to get steady and good super work.

To accomplish more nearly what I have just been outlining as to shape of hive, I am adopting a new divisible-chamber hive, each chamber to have the capacity of *about* 4 Langstroth frames. In width it is the same as the 8-frame dovetailed, and its length 16 inches. The net measurements are 5¼ deep, 12 wide and 16 1-16 long. The frame is 5x16, usual spacing and closed-end standing-style. The reason for adopting this size is that it will conform to the 4x5 section. I believe I can get better finish in the 4x5 section than in the 4¼x4¼—it conforms better by being higher than its width. If the sections would fit as well, and lumber would work as well, and covers were as easily made for a wider hive as for the narrower, I would prefer to have the brood-chamber the same in width each way, but 24 sections gives me so close to the ideal that I have settled on that shape—12x16 for length and width, and a 5-inch deep frame. Six-inch lumber will cut either super or brood-chamber, and the same body is to be used more or less interchangeable and for either purpose.

In using such a hive I have found some things that would not be expected. Suppose I hive a swarm onto sections of this hive—its capacity 8 Langstroth frames—work will, as usual, be begun in the top section, and almost immediately I can put on a super and have it occupied. There is a tendency to work upward from the starting point, or rather to work above it. As I understand it, it is this way: The colony having started in the top or second section of the brood-chamber, if a super be then added above and honey is being stored, they feel that they ought to store the honey above the brood that is being reared, so that in practice I have had, when swarms were hived, the colonies to fill one section of the brood-chamber and one or more supers, and that when there was an empty brood-chamber below of 4 Langstroth frames capacity. I think it is unusual to get much super work over a set of frames in the Langstroth hives until there is no more room below in which to store.

The main points are in having a hive that conforms to the natural conditions as much as possible—one that when there is no super on will be to the best advantage and liking of the bees. As supers are on but a small portion of the year, why not have the hive so it will be normal the whole time, if possible, and not one or two months out of the twelve, and these one or two the very ones in which there is the less need of economy of heat, and of conformity to instinct and inclination of the bees. The greatest need, and the time that taxes the apiarist the most to succeed, is in the wintering and springing—if only we can get the bees for the harvest we can manage the harvesting problem. Give me the hive and system that will put more bees in the field for action in time for the flow, and I will very largely increase my profits. The great problem is to get ready for the harvest, and I want the hive that will help in that direction; that done, I will get the honey.

If Mr. Doolittle reads this he will no doubt try to ridicule my ideas, and say he doesn't want his bees brooding sticks and spaces as they would have to do when there are so many frames, and bottom and top bars all through the hive. I do not want them there, either, I would gladly do away with them if I could, but how can I? The same width and depth of hive serves the bees just as well if there be no sticks at all from cover to floor, but we cannot contract nor ever make a success of comb honey with the constantly deep brood-chamber, at least with present knowledge. I have used frames as deep as 15 inches, and as shallow as 4¼ inches, *outside* measure, and I am making, and have made, a success of so very shallow frames. I have for several years had bees on a 4¼ deep frames, and they make colonies equal to anything on Langstroth or Gallup frames. The sticks are an aggravation, and the people who so strenuously object to them do just as Mr. Doolittle does—have two sets of sticks between every two supers.

Mr. Doolittle kicks about a few sticks in the brood-chamber, and not so long ago stormed about the thick top-bars to brood-frames, but now he uses a great quantity of lumber in his top-bars and adds still more to it by having a space above these bars and above that another set of sticks before the bees come to the sections; and if he wants to put on a second super two more sets of sticks are between the first and second sets of sections. Objectors to the sticks and spaces, all overlook the fact that usually the colony is confined to the space between two sets of sticks at the season of the year when the economy of heat is most needed, for the greater part, and when the colony becomes strong enough to cross the sticks and cluster on both sides of them, then they can rear brood in a ten-bushel box about as well as anywhere.

I am not advocating a wholesale change of hives. I am not yet throwing away other hives to adopt the new-fangled divisible brood-chamber hive. I am using both 8 and 10 frame dovetailed, and other styles of Langstroth hives, American frames, and several others. It is after having used a great variety in style and size of hive and frame that I come to the conclusions that I have, but having seen the demonstration of the principles, I point out to the fraternity the findings that all who can may benefit thereby. There is a future for the shallow sectional style of hive which becomes in fact a large hive, but it is not going to put all other hives in the fence-corner at once. I am confident that those using 8-frame hives can make good use of that style and get the practical application of the large-hive principle just as I have out-lined by using two stories and then contracting, and I firmly believe that in nine cases out of ten it will be found quite profitable if properly applied.

The wintering troubles in the ordinary hive are in many cases largely overcome by the use of cellars, but the large hive and colony will go far toward solving the cellar-problem. I note that I am by no means alone in the elastic-hive question, and in the large-hive matter there is a host of believers. Mr. Doolittle has for years been advocating the same principles, but reaches the goal by another route.

Larimer Co., Colo.

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

Starting in Bee-Keeping.

I am suddenly thrown on my own resources for support, and as my home is in a rich alfalfa district I believe I could do well keeping bees, but I do not understand the business, and there is no one here from whom I can obtain instruction. I write you to know where I can go for thorough instruction in all departments of the business.

Would it be best to try for a situation with a skilled apiarist? I want to devote my time to the work, and get a practical knowledge of the business as thoroughly as I can, and as soon as possible. MRS. E. K. HOFFMAN.

Phillips Co., Kan., Feb. 20.

You are fortunate indeed to be in a rich alfalfa district, if you are going into the bee-business, as large crops of beautiful honey come to bless those that live in the alfalfa districts. But there is another thing to be considered: Is the ground fully occupied by other bee-keepers? If so, it would be trespassing for you to start another apiary. It may be that the coast is entirely clear, in which case you are fortunate.

In some of the State agricultural schools they give instruction in bee-keeping, but I do not know whether they do or not in Kansas.

I think it would be the very best thing you could do to try for a situation with a skilled apiarist. Of course, the nearer home you could obtain such a position the better it would be for you.

You might try putting an advertisement in the American Bee Journal. I should think that would be the quickest way to obtain such a situation.

There are many things about the business that you must learn from the bees themselves, and if you are fortunate enough thus to get the benefit of the knowledge of a skilled apiarist, it will no doubt save you many dollars and cents. In the meantime, I should advise you to put in your time until spring studying a text-book, getting as thoroughly posted as possible in bee-lore. It will be a great help to you.

Water for Bees.

It seems a little out of season to talk about watering your bees, if, as in a good many localities, they are snugly housed in the cellar at the present moment. However, it is well to anticipate their wants. Indeed, there may not be any anticipation in the case where the bees are wintered out-of-doors. Just as soon as there comes a day warm enough for them to fly, one of the first things they will do is to start in search of water.

Bees are hard drinkers, and it is a matter of some importance that they have easy access to plenty of pure water without being obliged to fly some distance to secure it. Especially is this true in the early spring when cold winds, sudden changes in temperature, etc., work such havoc with our bees. Water they must have, and if they do not have it supplied near home they must seek it elsewhere.

More bees are lost in the early spring by flying some distance, becoming chilled, and never getting back to their hive, than some bee-keepers are aware of. We don't want anything that will induce them to take long flights, much less anything that will oblige them to.

Bees are largely creatures of habit, and when once they have established a drinking place it is not so easy to change them from it. And one of their favorite selections is the watering-tank, causing much annoyance to stock, and to the people taking care of the stock as well. It is also a great nuisance to have them around the well or cistern pump. Especially is this the case if there are small children in the family.

All this bother may be avoided if we select their drinking place for them, and get them started in the right place before they have learned to go anywhere else. This is not difficult to do. A large jar filled with water, with a number of pieces of wood put into it for the bees to alight upon (if they are somewhat rotten all the better), is all that is needed to make a good watering place. If this jar is kept supplied with water after the bees once get started there will be no more trouble about their bothering you anywhere else. It is a good plan to put a little salt into it once in a while. Then it will not be a breeding place for mosquitoes, and the bees seem to like it better when it is a little salty.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

Feeding Honey from a Dead, Mothy Colony.

I am a beginner in bee-keeping. I bought 2 colonies last October, but I had to kill one colony on account of having so many moth in it when I bought them. I have 6 store-combs half full of honey, from the hive of the colony I killed. Would it be wise to keep the combs for a swarm to start with, or would I better give it to the other bees to empty the comb? PENNSYLVANIA.

ANSWER.—The probability is that it will be better to let the colony have the honey for spring use.

◆ ◆ ◆

Absconding Colony—Observation Hive—Weak Colony—Keeping Queens.

1. June 26, 1902, I caught a swarm in the pasture on a fence-post, and I hived them in an old box, about 12 inches wide, and 2 feet long, and 8 inches high. I carried it home, and when I got there I turned the box upside down and the bees began to work there the same day, and 8 days after the first day the box was full of combs and some brood. Then I moved them about 2 feet from its old stand, and put a new dovetailed hive in its place with 8 Hoffman frames and division-board; then I took the box and dumped all the bees in front of the new hive. They began to work there the same day, but the other day they went to the woods. It was a big swarm of black bees. Why didn't the bees stay in the new hive as they did in the old box?

2. I have an observation hive that holds 1 Hoffman frame. I will put a frame with wired comb foundation in that hive, and hive a little swarm in there, about June 26. Do you think they will rear brood and send out a swarm the same year they are hived?

3. Whom is Findland under? and what is the name of their King? Who is the King of Norway? Who is the King of England?

4. I had a weak colony of bees this fall, and put 12 pounds of uncapped honey on top of them, and on top of that a super of maple leaves. I put the colony in the cellar where the temperature is from 40 to 45 degrees. Do you think the bees will winter all right?

5. How long can I keep a queen before introducing her to a colony, after I receive her by mail? Where should I keep her? MINNESOTA.

ANSWER.—1. If I understand you, the bees were put in the hive 8 days after June 26, and they staid there till "the other day," or about the first of February, as your letter is dated Feb. 9. The only reason I can suggest why a colony should desert its hive in the middle of the winter is that it was a case of starvation, or "a hunger-swarm." But I have some doubts about your having had weather warm enough for that, for their has been no day in this region warm enough for bees to fly since early in the winter, and it is not generally warmer in Minnesota than here. So it is quite possible that I do not understand correctly, and, if so, please explain more fully and I'll try again.

2. They will rear brood, and they may send out a swarm, but the chances are against the latter.

3. These questions are outside the scope of this department. Not kings, but queens, are to be discussed here, and only those queens as are found inside of such palaces as measure less than two feet in each direction.

4. Maybe, and maybe not. Getting down to 40 degrees is not so well as to have it warmer. Make sure the bees are on the honey; for a cluster of bees half an inch below the honey, at 40 degrees, would starve.

5. I suppose you mean keep her in a cage. She may be kept a month or less or more, the time varying greatly. She should be kept somewhere where there will be summer temperature.

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Cutting Out Queen-Cells and Swarming.

How would it be to cut out all of the queen-cells but one before they swarm? Would they swarm more than once then? SUBSCRIBER.

ANSWER.—It might make some difference, and it might make none. A better way is to cut out all cells but one *after* they swarm. If only one is left there will be little danger of any more swarming.

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Managing Virgin Queens.

Please tell me how to manage the virgin queens while taking their wedding-flight. Where a person wants to rear a few for his own use, say five or six will hatch from a choice queen and they take their flight in three to five days, one could be mated, but how about the others, and holding and getting them ready to be introduced to dark colonies, where the entrance-guards are on? IOWA.

ANSWER.—The only way is to have each virgin queen in a separate colony or nucleus. If you have several in the same hive, there will at once be a fight to a finish, at least until all but one are finished.

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Testing Honey for Adulterants.

Is there any simple way of finding the presence of glucose or other adulteration in extracted honey? "A B C of Bee-Culture" has a simple test for wax. There is a lot of honey on the market, in this vicinity, sold for pure honey, but some of us are unbelievers, and would like to test it. MASSACHUSETTS.

ANSWER.—I know of no simple way of being sure whether a sample of honey is pure. One of the German bee-journals has for some time had a standing offer of I think not less than $200 for a simple test that could be relied upon, but no one has secured the prize.

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Transferring Bees—Ground-Cork for Winter-Packing—Observation Hive—Bee-Literature.

I am very much of an amateur at bee-keeping, 16 years old, having purchased my first colony only last fall, but I intend to go into the business more extensively as soon as possible.

1. My colony is in an odd-sized frame hive, and I wish to transfer to a 10-frame hive in the spring. Would it work if I were to get the queen and most of the bees into the new hive on full sheets of foundation, put a queen-excluding zinc between, and put the old hive above the new one? Would the bees take the honey below, or would the queen fill the cells as fast as made?

2. How does ground-cork rank as a winter-packing material?

3. Do the sides of an observation hive have to be covered with some opaque substance, or will the bees allow the light to penetrate their domicile at all times?

4. I have my hive facing the east. Would the bees do better in the summer if facing the south?

5. I have as reference bee-book "The Honey-Bee," put out by the Department of Agriculture, which seems to cover thoroughly all the essential points. Farmers Bulletin No. 59 on "Bee-Keeping" may be had for the asking, and is worth having. The larger book costs only 15 cents.

6. In Chamber's Encylopædia I see this statement: "The best and newest honey is a clear fluid contained in a white comb, while older honey is of a yellowish and even reddish tint." Does honey in white comb change color with time? MINNESOTA.

ANSWERS.—1. Yes, it will work all right, only you must wait till the old hive is pretty well filled, perhaps about the time white clover is first in bloom. It matters little whether you get any bees below, if you get the queen there the bees will take care of themselves. Still, it may be a little better to have a fair force with the queen from the start. It is not likely that any honey will be carried down. It will rather be carried up, and as fast as cells are emptied in the upper hive by the hatching bees they will be filled with honey.

2. One of the very best, if not the best.

3. It is usual to keep the hive darkened when not under observation, but not absolutely necessary. Perhaps the bees will daub more propolis on the glass if the light be continuous.

4. When you get a second colony you can try it and see. I doubt if you will find any difference.

5. As I look out of my window just now, I see the ground covered with snow. If I were to say that all points in Illinois were covered with snow, you would be likely to tell me that I must not conclude that, just because there is snow as far as I can see. Just so as to all the essential points of bee-keeping. The works you mention are excellent as far as they go, but as you journey farther in the realm of bee-keeping you will find many points not covered by them, some of these points being essential to the best success in bee-keeping. I think I will be doing you a favor to advise you before your apiary attains very large proportions to secure one or more of the excellent text-books that cover the ground more fully.

6. Between you and me, "George," that doesn't sound as if that cyclopedia knew much about honey. Comb changes it color with time, if left in the hive, but when the honey is kept in good condition, either in or out of the hive, it remains of the same color. There is honey that is "of a yellowish and even reddish tint," but it has that tint when first gathered by the bees.

One who at 16 writes so neat a letter is likely to make a successful bee-keeper, for neatness is one of the most important things in bee-keeping.

Caging a Virgin Queen—Bees Died in Hive.

1. How can a virgin queen be caged and held before being mated ?

2. I have 18 colonies, packed and well protected out-of-doors, but I just left the supers on the same as in summer. Now I notice 5 colonies are dead; they had enough honey to have lasted them until spring. They are in clusters between the frames and combs, just the same as though they had frozen to death. I began to rake the dead ones out with a stick, but the odor was so bad I could hardly work with them. Is it possible it is dysentery ? I am sure I do not understand it, although it have worked with bees for 15 years.

ILLINOIS.

ANSWERS.—1. Perhaps from one to three weeks. But it is better to have the time just as short as possible. Caging doesn't do a virgin queen any good.

2. Yes, it is very possible dysentery or diarrhea is present, although it is barely possible that the honey is up in the super where the bees couldn't reach it, and so they starved to death. But in that case it hardly seems the odor should be so bad.

Taking a Colony Out of a Tree—Foul Brood.

1. I have found a colony of bees in a tree, about 15 feet high. What is the best way to get them out of the tree without hurting the bees ?

2. Can I take the bees out of the tree in February ? If not, when is the best time ?

3. How can I tell when a colony of bees has foul brood ?

MINNESOTA.

ANSWERS.—1. When it is warm enough for bees to fly you can fell the tree and then split it open, providing the fall does not split it. Better still, if you are willing to take the trouble, and conditions are favorable, cut off the tree just below where the bees are and let it down with a rope. Perhaps you can first cut off the tree above where you think the bees are, making it easier to let down.

2. If you fell the tree, better wait till it is warm enough for the bees to fly. If you cut or saw it off, letting it down carefully, you can do that in February; and if cut above and below the bees you may be able to haul the section of the tree with the bees to your home, setting it up as a hive to await warmer weather before getting the bees out.

3. You can tell by examining the brood to see whether you find present the symptoms described in your text-book.

Getting Bees from a Roof—Hoffman Frames—Increasing Fast—10-Frame Hive.

1. I have a colony of bees in the roof of a house. How can I hive them in a frame hive without taking up the roof ?
2. What time would be the best to transfer them ?
3. How would you winter bees on the summer stands ?
4. Are the self-spacing Hoffman brood-frames the best ?
5. What is the best way to increase bees fast ?
6. How would the 10-frame dovetail hive be for comb honey ?

ILLINOIS.

ANSWERS—1. That depends altogether upon the circumstances. It is possible that there is no feasible way without taking up the roof. It is possible that you can get at them from inside without the least difficulty. If so, give them enough smoke so you can cut out the combs, then fasten these in frames, get the bees on them, making sure that you have the queen, then, when you've got all the bees, close the hole or holes through which they have been entering, so that not a single bee can enter.

2. Probably it would be well to do so as soon as the weather is warm enough for them to fly nearly every day.

3. Study up carefully all that is said on the subject in your text-book, and then adopt the measures that seem best suited to your conditions. If anything in the text-book is not entirely clear, ask all the questions you like in this department. As you are only a little north of latitude 41 degrees in Illinois, it is possible that bees would winter with very little protection of any kind, only so that there be something to prevent the wind from blowing directly into the entrance.

4. If bee-glue is not troublesome where you are you will find them excellent. If glue is plenty, they are bad.

2. There are a great many different ways of artificial increase, and what is best for one is not always best for another. If you are experienced sufficiently you will find the nucleus plan good. It would be out of place to give a full treatise on artificial increase in this department, and you will do well to study up the principles in your text-book. You will find the subject quite fully treated in the book "Forty Years Among the Bees."

6. For many it is excellent. Some like a still larger hive, but in that case they use for part of the year two stories of 8-frame hives.

Question on Queen-Rearing.

On page 760 (1902), Mr. Bartz has an article on queen-rearing. What is his object in using an excluder under the whole hive instead of an entrance-guard or queen-trap? MISSOURI.

ANSWER.—I don't know what his object is, but the plan is good. It may be that he does it because the bees will have greater freedom than merely to have the entrance closed with excluder-zinc. Of course, the mere closing of the entrance with the zinc would prevent the issuing of the queen just as well, but it would give a better chance for air to have the excluder the full size of the hive and the entrance under it, especially if there is a deep bottom-board; and it would allow still better ventilation to have both hive and excluder raised an inch or so by a block under each of the four corners.

While you ought to secure excellent queens by the plan proposed, you must not be disappointed if in some cases the bees become dissatisfied with the queen for the continued failure to swarm, thus causing the loss of the queen. Neither should you expect to have queens as prolific as those mentioned by Mr. Bartz. Indeed, I think there must be some mistake if he means that each of his queens keeps 40 or 50 Langstroth frames filled with brood.

Pollen in Sections of Comb Honey.

1. What is the very best plan for a comb-honey producer to practice in order to keep pollen out of the sections?

2. Is it caused by hiving swarms on starters only ? If so, what can we do to prevent it? I had quite a lot of very nice sections ruined with it the past season. WISCONSIN.

ANSWERS.—1. I don't have very shallow brood-frames. Anything that tends to have the queen lay in the sections encourages pollen there, so queen-excluders are good to keep pollen out. But you don't need queen-excluders. I don't use them, and perhaps not one section in a thousand has pollen in it. Have thick top-bars, and fill the sections *full* of foundation. The thick top-bars make the queen less likely to go up. If you have only small starters in sections, the bees will build the drone-comb in them, and then the queen will go up to lay in the drone-comb, and pollen will follow.

2. Yes, if you hive a swarm on small starters and give it the supers with sections well under way, the queen will be quite likely to go up in the supers. And she is likely to do the same thing if your brood-frames are filled with foundation. Either use a queen-excluder, or else don't give the supers till the bees have made a start in the brood-chamber and the queen has begun to lay there.

Weight of a Colony—Honey Candying in Unfinished Sections—Taking Bees from Cellar.

1. How much is the dovetailed hive—honey, comb, bees, etc.—supposed to weigh just before putting them into the cellar ?

2. Is there any danger of the honey candying in unfinished sections before time for use next spring?

3. Is there any danger of the moth-millers getting in them ? I have them in the supers all ready for use, stacked up in the honey-house. If so, what shall I do to prevent it?

4. When is the proper time to take bees out of the cellar here in Wisconsin?

5. How far apart is it best to have bees on the summer stands ? and how far up from the ground?

6. What do you think of this locality (Polk Co.) for keeping bees? WISCONSIN.

ANSWERS.—1. I want my 8-frame hives to weigh at least 50 pounds. Ten-frame hives ought to weigh 10 pounds more.

2. Yes, you may safely count that every one will candy.

3. There is no danger of their making a start at this time of year, and if they are where they will freeze, that will kill not only the moths and the larvæ, but the eggs as well.

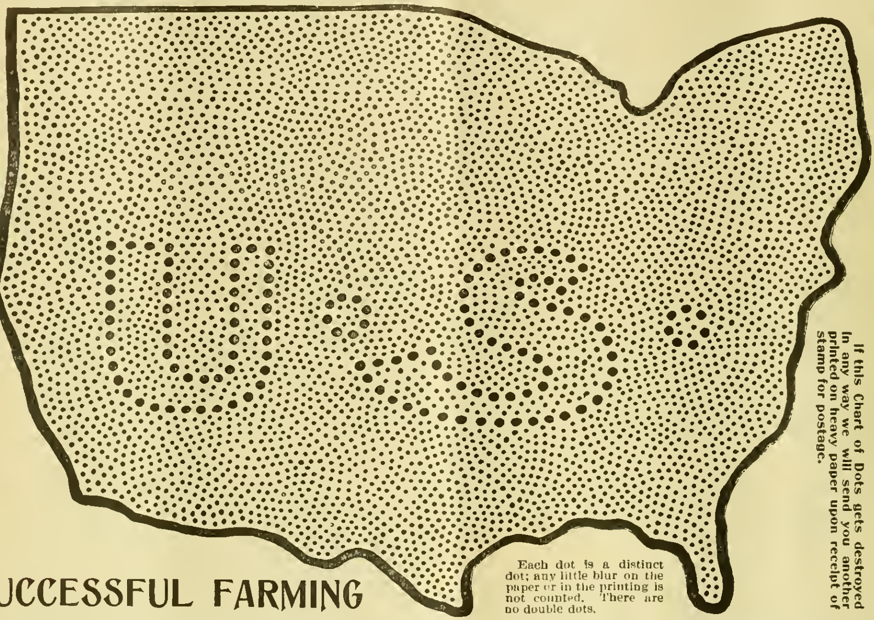
4. About the time red or soft maples are in bloom is a favorite time, providing the weather seems warm enough at that time.

5. Raise them 3 inches or more above the ground, and set them 6 feet apart from center to center each way, providing you have abundance of room. If room is scarce set them in pairs, the two hives of each pair almost touching each other, and leave a space of about 2 feet between the pairs, having the rows 6 feet apart or more. If you want to economize room still more, set the hives in pairs in a row as already mentioned, and then set another row close beside it, letting the hives of the two rows stand back to back.

6. I don't know anything about your particular locality, but Wisconsin, in general, is a good State for bee-keeping.

$1,500.00 IN GRAND PRIZES FREE TWO $350.00 SCHILLER PIANOS.

IF YOU CAN COUNT AND PLAN YOU CAN WIN!



If this Chart of Dots gets destroyed in any way we will send you another printed on heavy paper upon receipt of stamp for postage.

Each dot is a distinct dot; any little blur on the paper or in the printing is not counted. There are no double dots.

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One of the best 32-page illustrated farm papers published, will give to those who count the dots in the above diagram correctly or nearest correctly, or in case of tie suggest best plan, **TWO $350.00 PIANOS AND $800.00 IN CASH.** Read offer carefully. **Greatest offer ever made! You may lose $500 by not entering contest.**

Two $350.00 Schiller Pianos as first prizes—one to a lady and one to a gentleman; second prize, $200.00 in cash; third prize, $100.00; fourth, $50.00; fifth, $25.00; next, $10.00; next, $5.00; the next twenty-five, $3.00 each; next thirty-five, $1.00 each; two special prizes of $150 each (see below). Surely out of this immense list you can win. If you can count and plan you can.

AWARDS WILL BE MADE AS FOLLOWS: The person giving correct or coming nearest the correct number, gets first prize, next nearest second prize, and so on down the list. **The Pianos** will be awarded to those who count correct or nearest correct—one to a lady, the other to a gentleman. If there should be a tie in the count for any prize it will be awarded to the one of those tying who suggests best plan of counting the dots. It is likely the person giving nearest the correct count will win as it is no easy matter to count these dots.

GRAND SPECIAL PRIZES—To the gentleman and lady winning the Pianos will be given an **Extra Cash Prize of $150.00 Each** if they have **three** advance subscription counts entered. That is have paid two years in advance to Successful Farming $1.00 for the two years. If you win the piano and have paid one year at 50 cents the judges will give you the piano only. If you win the piano and have **two years paid** you get **$150.00 extra.** It will pay all to have the three advance counts.

CONDITIONS—The contest is open to all. Fifty cents pays for one full year's subscriptions to **Successful Farming,** and entitles you to one count; $1.00 pays for two years and entitles you to three counts and makes you eligible for the grand **$150 Special Prizes.**

TWO ELEGANT $350.00 SCHILLER PIANOS FREE. These are fine prizes and in order to give ladies and gentlemen each an equal opportunity, one will go to a lady and one to a gentleman. Mark your subscription blank below stating whether you wish to enter "ladies' contest" or "gentleman's contest." Two different members of a family may compete, one in the ladies' and the other in the gentleman's contest, if they wish. Fifty cents pays for one year's subscription to Successful Farming and entitles you to one count, or $1.00 pays for two years and entitles you to three counts, and by taking one on each side of what you think is the correct number you are more likely to win and *besides if you win you get the grand special prizes of $150 each which you do not get if you only have one year paid in advance.* See above regard to special prizes.

She Won a Piano For $1.00.

"You may say to all the world, I received my piano, an elegant Schiller. I never heard of you until I answered your ad., so you have no favorites. I will answer any body sending stamp.—Daisy Keller, Belle Plain, Iowa."

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"Oh I am so glad. Just received your check for $150. It proves to me that you deal fairly with all. I paid the $150 on our place.—Willis Sheirbon, Merrill, Ia."

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"I won $100, all my own. It pays to enter your contests. They are surely conducted fairly.—E. M. Hall, Montrose, Mo."

We will send names and addresses of dozens and dozens who have won bicycles, watches, sewing machines, besides many larger premiums, to any body writing for them.

Publisher SUCCESSFUL FARMING, Manhattan Bldg., Des Moines, Ia.

I enclose $............ **for subscription to SUCCESSFUL FARMING and I wish to enter the**...............(write ladies' or gents') **Dot Contest.** (If $1.00 is paid send three counts; if more than $1.00, send one additional count for each 50c over $1.00; if only 50c is paid send ONLY ONE count. The $150.00 special prizes go only to those having THREE or more counts entered.

My Count is: (1)...................... (2)...................... (3)......................

Name..

(Have paper addressed to head of the family)

P. O. .... **State**..............................

Remarks: My plan of counting is ....

Please Note—There is no element of chance, of guess work or lottery about this. It is a test of skill pure and simple. If you can count the dots correctly you can win. The number of prizes is so large you are bound to hit it somewhere.

State Treasurer Gilbertson, Mayor Brenton and a Banker, They Will Select, to Award Premiums

To Whom It May Concern: We know the publishers of SUCCESSFUL FARMING and can assure anybody interested that they will pay every premium they promise and treat every contestant fairly, showing no partiality. They have asked us to act as judges to award the prizes, and we will gladly act in that capacity.—G. S. Gilbertson, Treas. State of Iowa, and J. M. Brenton, Mayor of Des Moines,

Nobody connected with our paper is allowed to compete. Surely with such judges all may be assured fair treatment. You are as likely to win as anyone.

Key to Dots—To all who wish it and will write on separate sheet of paper "Send me key to dots," and sign your name and P. O. and enclose 10 cents to cover expenses, we will at close of contest send you a key to the dots showing just how many there are. Every contestant should order one, but it is not necessary unless you wish one. No key will be sent out until close of contest.

Contest closes April 30, 1903, but get your counts in at once, the earlier the better. Contestants having three advance subscription counts entered may enter additional counts at 25 cents each. Address,

SUCCESSFUL FARMING,
Manhattan Bldg, DES MOINES, IOWA

What Yon Yonson Thinks

Vel, ay vent to Chicago to da grate Chicago an nortvestern bee-keepers' meeting, an ay had plenty good time. All you bee-mans vot dident go you mist it plenty bad. An if you don't go next time you vil hit it da same vay ver you mist it dis time.

My goodness, ay fine out lots 'bout bees, an how to mak dom lay plenty hunny. An ay see lots of big bee-mans, but dom don't look so very big, an' dom don't seems to feel so very big, but dom iss plenty smart. An little bee-keepers lak Yon Yonson can yust sit stil an' lern more as nobody elst. Da Nortvestern bee-keepers assoceating iss some plenty good ting, an if you give Mr. Moore, da man vat du da riting, von dollar, he yoin you in to deirs lodge, an da N. B. K. A., bote on da same time, so po das vay ve can kill 2 burds vid a von dollar bill.

It vas awful nice gurl at da convention; som rite lak sixty, an she rite down all vat dom sed, so Mr. New York print it in Merican bee-paper.

Yon Yonson never bin to Chicago before, so after da convenshul vas over, ay tank mebby it iss better ay look around. So ay vent to stock show an' seen da hogs, cows, horses, an so on, an dom vas plenty nice. So ay go to da bord of trade, ver you know dom hav so many bulls an bears. Ay dont can understan' how dom can keep so many cattels an bears togedder, but mebby its 'cause it iss different locality; but, mine goodeness, ay vas too late, for dom yust sed amen. Ay look roun, but ay don't did see any cattels or bears, but ay herd feller vat sed some ting 'bout vattered stock, so ay tank mebby dom drove dom cattles to da lake to drink, or mebby dom bears ete dom eattles all up.

So, befor ay go home ay tank mebby its better ay buy som leetel present for Mrs. Yon Yonson, so ay go into plenty big store an ay git some present, kine a cheep, of cours. Da klurk he akt awful nice an friendly, an vont Yon Yonson to buy hole pile ma flumy fixens, but dom don't kin fool Svede man po das vay.

Vel, ay don't got nuff change, so ay give him ten dollar bill, an he rite on a pece of paper, an he put my ten dollars in a little basket vat hang on a vire. An my for da good land, dat basket took crasy streak an yust run avay ma hole ting. "My goodeness," ay say, "You don't goan to play no Yank trick on Yon Yonson," ay say. So ay lit out holly hooping after da basket. "Hold on da," klurk say.

"Yes, you bet ay hold on to my ten dollars, if ay ketch das basket," ay say.

Da store vas ful ma vimens, but dom cleared da track ven dom see me after das basket. But dom don't got more sens dan to laff. But purty soon ay run rite over tree vimens, an ay fall down an bump my nose in da floor. My goodeness, da yust hurt lak forty blases; an ven ay git up an pull my nose bak in shape ay don't kin see da basket. But von grate, big man feller he tak holt of me, an he say: "My goodeness, hay-seed seems to be goan

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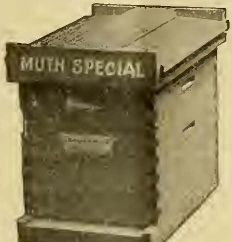

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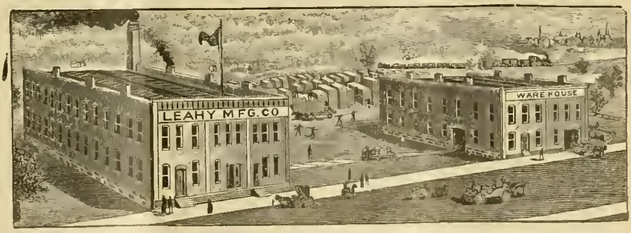

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This buggy is made of selected second growth split hickory—split, not sawed—and is a thoroughly high grade vehicle at a low price. It has heel braces on shafts, good carpet, full rubber top, solid panel spring back, ¼-in. round edge steel tired wheels, boot on back of body, high leather dash, storm apron, side curtains, open hearth, oil tempered springs, Norway iron bolts and forgings, and many other points of merit. It is handsome and durable, and you can have your choice of oil and lead paint in colors.

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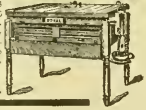

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Cotalog Free. Round Rock, Tex.

down," he say. "Ay don't vont any hayseed," ay say, "but ay von't das crasy basket vot run off vid my ten dollars," ay say.

"You cum along ma me," he say. An he tak me bak, an der vas da basket an my change. My goodeness, ay don't kin see vy fore da basket tak such crasy spells an run all over da store, po das vay, so ay say good by, caus I don't care to stay long ver even da furniture git crasy spells. Da klurk he mak big smile, an he say, "Com bak agin, Unkel George." "All rite," ay say, "but if you don't voch out dat basket mebby run avay da store an hole shuting match," ay say. "I'll keep an eye on da basket, Unkle George," he say. "My name bean Yon Yonson, an ay don't bean yours Unkel George," ay say. "But you iss a plenty nice feller, but if I bean so smart sun you, ay vont bean here nor no place elst," ay say.

But, my goodeness, da bean lots ma peoples in Chicago, an every body on da street seems to be in plenty awful big hurry. An' dom yust go on da trot lak da vas fraid some von vas after dom ma sharp stick, an' dom don't say "how de du" to nobody. An' by da depo dom mans stan aroun ma nice buggies an vont Yon Yonson to ride. An in da depo it vas plenty sine vat say, "Bevare of confidence men," cause in Chicago lection alvays go big majority for confidence, so ven ay start to go up town it vas awful nice feler, som say, "I vil carry yours grip, Unkle Rube," he say. But in his eyes da confidence yust stick out lak Philadelphia, so ay say, "I gess nit." "I show you da town," he say. "My goodness, do you tank ay vas bline ?" ay say. "Don't I can see da town ? Ay don't yust com off from white clover paster, an da grass don't grow fast nuf under my feet to go to seed," ay say..

So he yust laff, an he mak goo-goo eyes at nodder von feller, an' go on an ten to his bisness. But ay had good luck and got hom all rite. YON YONSON.

FROM MANY FIELDS

Good Season for Honey.

We had a very good honey season in 1902. I had 9 colonies in the spring, increased 6, and caught one extra. I got 750 pounds of surplus honey, and sold the most of it for 12½ cents per pound, only keeping what I wanted for my own use.

MRS. BEN FERGUSON.

Ford Co., Kans., Jan. 19.

Cleaning Out Unfinished Sections.

What Miss Wilson says, on page 41, about cleaning unfinished sections, affords me an opportunity to say a few more words on that subject.

Last fall I had more than 1000 sections cleaned by the plan given on page 78 (1902). There is no kink about it. The essentials to a reasonable, if not absolute, success are:

1. To begin the work early in the fall.
2. To be sure to have a piece of burlap or other loose-woven cloth between super and brood-chamber, so that there shall be left only a small space above the brood-frames uncovered.
3. That the uncapping of the sealed honey be not delayed until the weather becomes so cool that the bees are compelled to stay in the brood-chamber a large part of the time.

I can see no advantage, but rather some disadvantage, in placing an empty hive-body between brood-chamber and super.

Although I was very successful in getting sections cleaned out in the way I have related, yet, in some instances, when a super full of sections seemed to be more than the colony needed, I would take out a part of the unsealed ones and place them, about sunset, at the entrance of the hive of some other colony that needed feeding. Doing this on

To make cows pay, use Sharples Cream Separators
Book Business Dairying & Cat.212 free. W.Chester, Pa

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is not safe unless you have an
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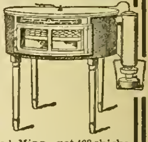

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TOPEKA, KAN.

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GEO. H. STAHL, Quincy, Ill.

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warm evenings the bees would clean them out during the night, or so early in the morning that no attempts were made at robbing.

If Miss Wilson has had such poor success after trying everything that I suggested, I own that I do not understand the reason why, and ask her to review her procedure and see if something was not omitted.

Piling up supers of unfinished sections to be robbed out by the bees of the whole yard is too wasteful a method to be practiced. Rather than give a large share of the honey to the colonies not needing it, I would put the honey on all the needy ones, and then if any sections remained uncleaned near the close of the season, I would pile these up and let the bees have access to them.

Mr. Hasty's answer to "Beginner" is rather discouraging. I wonder whether Mr. Hasty leaves the sections on the needy colonies and then does nothing else. I did so once, but not any more. If the sections are not isolated from the brood-chamber, and the sealed honey not uncapped, and this work not done while the weather is yet warm, it is likely you will not get many sections cleaned out. Edwin Bevins.

Decatur Co., Iowa.

Wintered Well So Far.

Bees have wintered well so far, and have commenced to rear brood.

I can not get along without the American Bee Journal. A. W. Atkerson.

Jasper Co., Mo., Feb. 13.

Propolisin for Piles.

I will attempt to tell "Minnesota" (page 90) how to make propolisin:

Take propolis and olive oil enough to make it soft when mixed. Put into a vessel and heat slowly until the propolis is melted, then strain through a cloth and let cool. I suppose about 3 measures of oil to 1 of propolis would be about right; if too hard, add more oil. I got the recipe in Gleanings; I do not remember the page or date. Mrs. Rousseau has made some and used castor-oil. This is the best remedy for piles I ever knew anything about. Made with castor-oil it seems to be especially adapted for the cure of this disease. The way to use it is to cleanse the parts thoroughly with water warmed, then insert a lump at bedtime, and again in the morning. L. C. Rousseau.

Ellis Co., Tex., Feb. 11.

Fears Short Stores.

Last spring I bought 19 colonies of bees. They increased to 42 in spite of me, and gave me 590 pounds of comb honey. Two colonies starved, and another was eaten up by millers. I am afraid some of my bees went into winter quarters short of stores.

Polk Co., Wis., Feb. 2. V. A. Hanson.

Appear to Winter All Right.

I have been in the bee-business for the last 50 years, and now have more than 40 colonies. They did fairly well last winter. I winter them on the summer stands. To all appearances they are wintering all right. I am 74 years old. Riley Sanford.

Wayne Co., N. Y., Feb. 16.

Dr. Gallup's Queen-Rearing Controversy.

I have been a bee-keeper for seven years, and read with delight Dr. Gallup's articles on rearing long-lived queens; also the counter articles of the breeders whom he has touched on the raw. The Doctor has set the ball in motion, and it will not stop rolling until his "unbilical cord" theory is proved or disproved. My sponsor is a bee-keeper of 37 years' experience, and he claims, of the hundreds of queens purchased, he has never received a queen, reared by any method or breeder, that has lived more than one year. Is this unusual mortality caused by rearing from worker-larvæ, or is it the sudden stoppage from laying, and consequent injury from transmission through the mails? Let the breeders and laymen ventilate this question thoroughly. In the meantime, go on Dr. Gallup; if you are wrong you have performed a genuine service in opening this question; if you are right in your theory, you have been an incalculable benefit to bee-keeping posterity. Norton Wagner.

Lackawanna Co., Pa., Jan. 31.

Best Flight in Two Months.

The bees are having a flight to-day, the first good flight for two months. They seem to be all right so far. J. F. Michael.

Randolph Co., Ind., Feb. 2.

Oregon and Washington for Bee-Keeping.

I notice on page 58 the above heading. I do not think there is any one man that can answer that question. Washington alone differs a great deal. It is a big State. While the eastern part of Washington is dry the western part, or coast, is extremely damp; they have lots of rain, but little or no snow. The bees can generally fly all winter. Blossoms are in abundance, but weather in which to gather honey is scarce. The bees generally begin to gather pollen the last days of February and the first days of March; but usually after that there comes a setback of rain which lasts sometimes until July, with but little good dry weather. Of course, there is some good weather, but the last four or five years have been remarkably wet.

Of blossoms here that give honey we have the salmonberry, thimbleberry, huckleberry, blueberry, blackberry or black caps; white, red, and yellow clover, dandelion and fireweed. And the trees that give honey are the vine-maple, crab-apple, barberry, soft maple, and a whole lot of others too numerous to recollect; besides fruit-trees and small fruit such as raspberry, strawberry, and blackberry. Cultivated berries do well here. It is rainest near the coast, and diminishes as you go farther inland. The honey gathered, with or without water, is a good deal better than California honey; and I have sold my honey, put up in one-half gallon jars, for 60 cents per jar. This is all the information I can give about Washington, and it is also true of Oregon.

We live close to Columbia, and when we go to town we cross the river at Astoria, Oreg. A map will show this is Wahkiakum Co., Wash., while Astoria is in Clatsop Co., Oreg.

We have the first snow we have had in two years; it is 4 inches deep. O. K. Rice.

Wahkiakum Co., Wash., Jan. 28.

Fears Heavy Loss of Bees.

My bees stopped breeding early last fall, and I fear a heavy loss this winter and spring on account of the age of the bees and the hard winter. They are on the summer stands, and have had but one good, cleansing flight during the winter. H. W. Congdon.

Monona Co., Iowa, Feb. 9.

Report for Two Years.

The year 1901 was a little better than the year before. Spring was a little backward, the bees built up fine after all, but the honey-flow was very short; they gave some surplus, and went into winter quarters in good condition. My bees came out in the spring of 1902 stronger in bees than they have since I have had bees, so this leads to great hopes; but, dear me, to think we should see the reverse! It was the worst spring for cold and wet weather, which seemed to blast all of our hopes. Our honey-flow comes here about the middle of June, but no honey was coming. The stores of the bees were on the decline. Weak colonies were starving and absconding their hives, leaving the brood. But all at once a change came the first week in July, when the honey came, and those colonies that had built up at that time did fair work, as it was a good flow all through July, and so this part of the country got a good crop of honey after all, and the bees were in good condition for winter. So 1902 turned out all right, and I was satisfied.

I can not account for Mr. Doolittle's statement, that bees need no ventilation in the cellar more than they get through the walls. This is a puzzle to me. I have a tube in mine 8x7 inches, and it has not been closed one day all winter to this date. The inner door has been open nearly two weeks. The temperature is 44 degrees; a few mild days it run up to 48 degrees, and they were roaring. It was all right to open the other door at night, as it cooled them down to 38 degrees, and they were as quiet as could be; they could hardly be heard, so I do not see what I should do without ventilation. I believe that without ventilation my bees would come out and get lost on the cellar-bottom.

This winter I will make an experiment in two directions—first, in taking them in on Dec. 8 and 9, with the mercury 4 and 8 degrees below zero; second, with ventilator and inner door open; at this time they seem to winter all right, and so I hope for safe wintering, and a good honey season for 1903, so that we may secure a good crop.

C. H. Voigt.

Keewaunee Co., Wis., Feb. 5.

Tartaric Acid and Granulation.

On page 78, Mr. C. J. Barber, of Monona Co., Iowa, wrote: "To prevent extracted honey from granulating, I put in a Mason jar a little tartaric acid." Will he please let us know how much that is in two quarts of honey (by weight or measure)?

Arthur Schultz.

Dodge Co., Wis., Jan. 3.

One of the Old Bee-Keepers.

Mr. Editor:—You have improved the American Bee Journal almost beyond measure. When I first took it—must be over 40 years ago when Wagner published it in Philadelphia—it was hardly a comparison to what you have made it to-day.

I venture to say I am the oldest bee-keeper on your list; I kept bees in Pennsylvania 25 years; came here after the war (1866), bringing bees with me, making it 37 years that I have been here.

It amuses me sometimes to note how singularly some persons write about their conclusions, as if they knew it all, and, no doubt, think they do, and may be correct from their standpoint, or their location; but, as a whole, or a combination of circumstances and locations, they are simply "off," and they would not believe it if the strict truth were told them. But "variety is the spice of life."

Fairfax Co., Va., Feb. 9. Wm. Urich.

Northeastern Wis. Convention.

The bee-keepers of the Northeastern Wisconsin Association held their second convention at the residence of John H. Terens, in Manitowoc County, Nov. 8, 1902. The meeting was called to order by Pres. Terens at 10 a.m. As the Secretary was absent, Fred Jachimstal was appointed secretary *pro tem.*

Fred Trapp then read a paper on "Wintering and Ventilation of Bees," which brought out a good discussion, as all present were quite interested in the subject. After the discussion a vote was taken on which is the best way to winter bees, inside or on the summer stands. Six were cast for inside wintering, and 8 for outside wintering.

A paper was read by C. H. Voigt, on "Prevention of Absconding Swarms." After it had been fully discussed, John Cochems followed with "What Hive is Best Adapted to this Climate?" He wanted the 8-frame Langstroth. After discussing that topic it showed that the majority were in favor of the 10-frame Langstroth.

John H. Terens then gave a talk on, "Black or Italian Bees, Which are Better?" He did not think the Italians gathered any better honey than blacks; in his opinion the blacks would gather just as nice honey as the Italians, but he was in favor of the Italians, if for nothing else than their fine dress.

A committee of three was appointed by the

Tennessee Queens.

Daughters of Select Imported Italian, Select long-tongued (Moore's), and Select, Straight 5-band Queens. Bred 3¼ miles apart, and mated to select drones. No bees owned within 2½ miles; none impure within 3, and but few within 5 miles. No disease. 30 years' experience. WARRANTED QUEENS, 75 cents each; TESTED, $1.50 each. Discount on large orders.

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president to draft a program for the next meeting. A cordial invitation is given to those who may read this, and that live near, and are interested in bees, to meet with us on the date given in the program. The State foul brood inspector, N. E. France, has promised to be with us. We hope it will be an interesting meeting.

A vote of thanks was tendered Pres. Terens for his kindness in fixing up a room in which to hold our meeting, and offering the same again, if it was good enough, which offer was thankfully accepted.

The convention then adjourned to meet again on the date given in the program.

FRED JACHIMSTAL, *Sec. Pro Tem.*

The following is the program for the semi-annual convention of the Northeastern Wisconsin Bee-Keepers' Association, which will be held at the residence of J. H. Terens, of Mishicott, May 12, 1903, opening at 10 a.m. sharp:

1. Foul Brood—N. E. France.
2. Queen-Rearing, How Can the Most Prolific Queens be Reared ?—L. C. Koehler.
3. Spring Dwindling—C. H. Voigt.
4. Which is the Most Profitable Hive for Wintering ?—J. H. Terens.
5. Best Way of Marketing Honey—Fred Trapp.
6. Absconding Swarms—John Cochems.
7. Which is the More Profitable, Comb or Extracted Honey ?—Fred Jachimstal.
8. Bee-Pasturage—V. Cloupek.

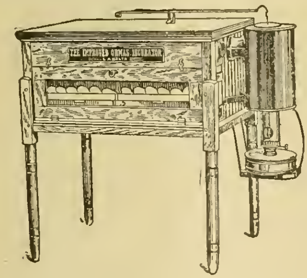
COMMITTEE.

CONVENTION NOTICE.

Michigan.—The Northern Michigan bee-keepers will hold a convention March 25 and 26, in Bellaire, Antrim Co., in the Town Hall. Special rates have been secured for entertainment at the Ellis Hotel, and also the Bellaire House, at $1.00 per day. GEO. H. KIRKPATRICK.

The Ormas Incubator.—Probably no reasonable priced incubator has a larger sale or a greater number of friends than the Ormas, advertised in this number. This machine is made of the best material, but being made in a small town where the cost of construction is reduced to the lowest point, it can be sold at a low price and yet be made of good material.

The sales double up every year, and now the Ormas is known all over the country as a strictly first-class low-priced machine. It may truly be said of this machine that it is cheap in nothing but the price.



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Sweet Clover (white).....	$ .75	$1.40	$3.25	$6.00
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White Clover	1.20	2.30	5.50	10.50
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Prices subject to market changes.

Single pound 5 cents more than the 5-pound rate, and 10 cents extra for postage and sack.

Add 25 cents to your order, for cartage, if wanted by freight, or 10 cents per pound if wanted by mail.

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51Atf Please mention the Bee Journal.

The Titus Nursery, Nemaha, Nebr., issues a very neat catalog entitled "How to Grow Fruit" that is bristling full of information gained by years of experience in growing fruit for the market. Every one of our readers who is interested in growing fruit should have this catalog, which can be obtained by addressing the firm, free of charge. This is a splendid book and is well worth sending for. Special attention is paid to the "Queen of all Apples"—Virginia Beauty—a large red winter apple of the finest quality. Virginia Beauty carried off first premium for the best new apple not previously shown at the late St. Louis Fair against 20 competitors. The Judge remarked, "It is the best flavored apple I ever sampled." Please mention the American Bee Journal when writing.

HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, March 7.—The demand for comb honey has been and is of small volume, prices are weak, concessions being made where necessary to effect sales. Fancy white comb held at 15@16c; all other grades of white are irregular at 13@14c; light amber, 10@12c dark and ambers, 9@10c. Extracted, clover and basswood, 7@8c; other white grades, 6@7c; amber, 5½@6½c. Beeswax steady at 30c.

R. A. BURNETT & Co.

ALBANY, N. Y., Feb. 20. — Honey demand quiet; receipts and stock light. Comb selling, light, 15c; mixed, 14@15c; dark, 13@14c. Extracted, dark, at 7@7½c. Beeswax firm, 30@32c.

H. R. WRIGHT.

KANSAS CITY, Feb. 21.—The demand for both comb and extracted honey is better, receipts light. We quote as follows: Extra fancy white comb, per case, $3.40; strictly No. 1, $3.30; No. 1 amber, $3@$3.25; No. 2, white and amber, $2.50. Extracted, white, per pound, 7c; amber, 6@6½c. Beeswax, 30c. C. C. CLEMONS & Co.

CINCINNATI, Feb 7—The demand for all kinds of honey has fallen off considerably in the last few weeks, owing to the many other sweets offered at this season of the year. Lower prices are no inducement to increase the consumption, as the demand is not there, and will not be until about the end of the month; consequently it is folly to offer at lower prices. We quote amber extracted in barrels at 5¾@6¼c; white clover and basswood, 8@9½c. Fancy white comb honey, 16@17c; lower grades hard to sell at any price. Beeswax firm at 30c.

THE FRED W. MUTH Co.

NEW YORK, March 5.—There is a fair demand for white comb at 15c per pound for fancy, 13@14c for No. 1, and 12c for amber, with sufficient supply to meet the demand. Dark honey will be cleaned up with very little left; it is selling at about 11c per pound. Extracted rather weak and in quantity lots, prices generally shaded. We quote: White, 7@7½ cents; amber, 6½@7c; dark, 6c. Beeswax scarce at 30@31c for good average. HILDRETH & SEGELKEN.

CINCINNATI, Mar. 7.—The comb honey market has weakened a little more; is freely offered at following prices: Fancy white, 14@15c; no demand for ambers whatever. The market for extracted has not been changed and prices are as follows: Amber in barrels, 5¼@5½c; in cans 6@6½c; white clover, 8@8½c. Beeswax, 28@30c.

C. H. W. WEBER.

SAN FRANCISCO, Jan. 14.—White comb honey, 11½@12½c; light amber, 10@11c; dark, 5@6½c. Extracted, white, 6@6½c; light amber, 5@5¼c; amber, 4@4½c. Beeswax, good to choice, light, 26@27½c; strictly fancy light, 29@30c.

The country merchant, representative of trade interests, estimates "entire stock of honey of 1902 in the State at 15 cars," worth 5¾@6c per pound at primary points, subject to a $1.10 freight-rate to the East.

WANTED WHITE CLOVER EXTRACTED HONEY!

Send sample and best price delivered here; also Fancy Comb wanted in no-drip cases.

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W. M. GERRISH, Epping, N.H., carries a full line of our goods at catalog prices. Order of him and save the freight.

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Only 8c a lb.

FOR THE BEST

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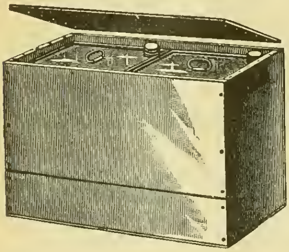

A sample by mail, 10c for package and postage. By freight, f.o.b. Chicago: 2 cans in box (120 lbs.) at 8 cents a pound. We can furnish Basswood Honey at ½c a pound more.

This Alfalfa Honey should go off like hot-cakes. Better order at once, and get a good supply for your customers.

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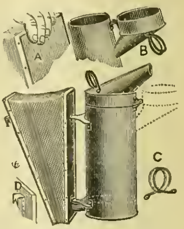

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Have you ever been bothered by a nozzle flying open and spilling the fire just when you needed it most? Then get a CORNEIL, the nozzle of which will not fly open, or get a VESUVIUS, which has no removable nozzle.

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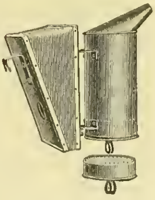
Do you often wish that something could be put on the bellows to give your fingers a better hold? Then try one of our smokers which are bound with folded tin in such a way as to give much better hold than any slot cut in the wood.



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Artificial Queen-Cell Cups.

EVERY bee-keeper who rears queens by the Doolittle method, knows how tiresome it is to dip the cells; it takes time, and they are not uniform. Have you ever thought how convenient it would be to have ready-made cell cups for queen-rearing?

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AMERICAN BEE JOURNAL

43d Year. CHICAGO, ILL., MARCH 19, 1903. No. 12.

WEEKLY

1833. 1903.

THOMAS G. NEWMAN.

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DEPT. EDITORS,
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Charles T. Cherry, Oswego.
John W. Linden, 220 Grove st., Aurora
James P. Cavanaugh, 162 W. 18th st., Chicago.
Peter Knolla, 706 W. 18th. st., Chicago.
Ladislas J. Fligl, 606 S. Center st., Chicago.
Ira M. Lish, Saunemin.
Josiah Kerrick, Minonk.
John P. Moran, Fairbury.
Edward J. Smejkal, 77 Bunker st., Chicago.
John Noonan, 307 W. Congress st., Chicago.
Clarence S. Darrow, 456 S. Des Plaines st., Chicago.
Wm. G. McRoberts, 6 9 E. McClure av., Peoria.
Charles F. Black, Mapleton.
Jefferson R. Boulware, 212 Perry av., Peoria.
Augustus W. Nohe, 947 Clifton Ave., Chicago.
William W. Weare, Morton Park.
Richard E. Burke, 1523 W. Van Buren St., Chicago
Edward C. Curtis, Grant Park.
Horace Russell, Milford.
W. W. Parish, Jr. Momence.
Fred'k E. Erickson, 256 N. Carpenter st., Chicago.
Benjamin M. Mitchell, 1314 Fulton st., Chicago.
John J. McManaman, 1029 W. Superior st., Chicago.
Charles A. Allen, Hoopeston.
George H. Gordon, Paris.
Coulson V. McClenathan, Danville.
Henry W. Austin, 217 Lake st., Oak Park.
Abel Davis, 14 Flower st., Chicago.
John S. Clark, 2327 Grand ave., Chicago.
Julius N. Rodman, Deland.
John H. Uppendahl, Dalton City.
Evan Stevenson, Monticello.
Robert E. Pendarvis, 1537 N. 71st ct., Chicago.
Herman H. Breidt, 2710 Milwaukee ave., Chicago.
Frank H. Landmesser, 84 Hamburg st., Chicago.
Wesley M. Owen, Le Roy.
John A. Montelius, Piper City.
John F. Heffernan, 106 E. Front st., Bloomington.
Albert Glade, 9 N. Curtis st., Chicago.
Joseph S. Geshkewich, 674 Milwaukee ave. Chicago
Daniel V. McDonough, 84 S. Centre ave., Chicago.
Carl Swigart, Weldon.
Arthur J. Gallagher, Decatur.
James M. Gray, 521 W. Williams st., Decatur.
Samuel E. Erickson, 51 Locust st., Chicago.
Bernard F. Clettenberg, 126 Larrabee st., Chicago.
M. B. McNulty, 151 Sedgwick st., Chicago.
Homer J. Tice, Greenview.
John A. Petrie, Greenview.
Henry H. Elliott, Kilbourne.
Henry C. Beitler, 16 Lincoln ave., Chicago.
Joseph M. Patterson, 166 Astor st., Chicago.
John C. Werdell, 82 Mohawk st., Chicago.
Lawrence Y. Sherman, Macomb.
Everett C. Hardin, Monmouth.
William McKinley, 732 E. Broadway, Monmouth.
Lawrence M. Magill, Moline.
Charles A. Samuelson, Sherrard.
George A. Cooke, Aledo.
D. B. Miller, Casey.
Carl Burgett, Newman.
J. T. H nes, Newman.
John B. Castle, Sandwich.
Charles A. Wetherbee, Sterling.
Caleb C. Johnson, Sterling.
William Schlagenhauf, 1010 Jefferson st., Quincy.
Jacob Groves, Camp Point.
Irvin D. Webster, Pleasant Hill.
Nathaniel W. Tibbetts, Kewanee.
James E. Noyes, Bradford.
James K. Blish, Kewanee.
Thomas Rinaker, Carlinville.
Frank W. Burton, 1st North st., Carlinville.
Edward A. Rice, 220 Kirkham st., Litchfield.
William D. Isermann, Streator.
Enoch H. Pedersen, Sheridan.
Lee O. Browne, Ottawa.
George T. Turner, Vandalia.
Henry O. Minnis, Edinburg.
William O. Wallace, Shelbyville.
Samuel J. Drew, 1221 Benton st., Joliet.
Guy L. Bush, Downers Grove.
William A. Bowles, 1 7 Richard st., Joliet.
William F. Bundy, 136 Hamm ave., Centralia.
Charles L. Farris, Louisville.
Fred Pullen, Centralia.
Wilfred Arnold, 451 N. Cherry st., Galesburg.
Burnett M. Chiperfield, 8 N. Ave. A., Canton.
John Hughes, Table Grove.
Robert J. McElvain, 814 North st., Murphysboro.
Sylvester W. McGuire, Sparta.
Charles S. Luke, Nashville.
John A. Wheeler, Auburn.
Abner G. Murray, 1007 N. 9th st., Springfield.
William S. Lurton, E. College ave., Jacksonville.
Lowry E. Sunderland, Fairfield.
Thomas Tippit, Olney.
John M. Rapp, Fairfield.
Cicero J. Lindly, Greenville,
William Montgomery, Moro.
Charles Carrillon, Smithboro.
John W. Leaverton, Palestine.
Mahlon H. Mundy, 4th & Chestnut sts., Mt. Carmel.
Carl Busse, Lawrenceville.
William E. Trautmann, 800 Ohio ave., E. St. Louis
Martin Schnipper, 218 N. Silver st., Belleville.
James O. Miller, 701 E. First st., Belleville.
James E N. Edwards Anna.
Charles M. Gaunt, Mound City.
William L. Eskew, Benton.
A. W. Walker, Golconda.
John H. Miller, McLeansboro.
David J. Underwood, McLeansboro.

The bee-keepers' Bill is known as HOUSE BILL NO. 356 in the House of Representatives, and as SENATE BILL NO. 207 in the Senate. When writing to Senators mention the latter Bill, and when writing House members mention the former Bill. All the members of the Legislature can be addressed *State House, Springfield, Ill.*, instead of to their residence post-offices.

Now, let every Illinois reader of the American Bee Journal write *at once* to his Senator and Representatives, requesting them to support and vote for the Bill "making an appropriation for the Illinois Bee-Keepers' Association." Write to as many other members of the Legislature as you can, in addition to your own Senator and Representatives. The bee-keepers from all over the State should simply "snow them under" with letters.

We may say that we think there is a good prospect of the Bill being passed. But the more letters from bee-keepers to the law-makers the better.

Do it now!

* * *

GENERAL MANAGER FRANCE, of Platteville, Wis., wrote us March 2 as follows:

> I go one week to Farmers' Institutes, talking bee-culture and small fruit; and then have to stay at home a week to catch up in General Manager correspondence.
>
> To-day I have receipted for dues from 28 members in 13 States—Maine to California. I have a basket full of letters to answer. Several State Legislatures I am laboring with to enact better laws of interest to bee-keepers; and a case to investigate where a city declared bees a nuisance.
>
> No danger of the General Manager being out of a job very soon.
>
> N. E. FRANCE, *Gen. Mgr.*

* * *

THE REARING OF CHILDREN is the subject of a discussion in the Progressive Bee-Keeper by F. L. Thompson and Somnambulist. As Mr. Thompson is a bachelor more or less confirmed, and as it is generally understood that Sommy has never waked up sufficiently to select a wife—well, we shall see what we shall see.

* * *

JOHN V. NEBEL, one of the veteran bee-keepers of Missouri, has been elected a member of the State Legislature, in spite of the fact that his opponent belonged to the party which, for years, has held the ascendancy. There's good timber for law-makers among bee-keepers.

* * *

TEXAS AND UTAH are both doing some lively pulling for the next National convention. So is California.

ESTABLISHT IN 1861

AMERICAN BEE JOURNAL

THE OLDEST BEE-PAPER IN AMERICA

43d YEAR. CHICAGO, ILL., MARCH 19, 1903. No. 12.

Editorial.

DEATH OF THOMAS G. NEWMAN.

About 5 p.m., March 10, we received the following telegram announcing the death of Thomas G. Newman:

AMERICAN BEE JOURNAL, Chicago.—
Father just died. Month's illness. Gastritis. 70 next September.
A. H. NEWMAN.

The following biographical paragraphs are taken from a sketch written by Dr. C. C. Miller for Gleanings in Bee-Culture, in 1888:

Thomas Gabriel Newman was born near Bridgewater, in southwestern England, Sept. 26, 1833. He was left fatherless at ten years of age, with three older brothers and a sister, the mother being left a penniless widow by reason of the father's endorsing for a large sum. The boys were all put out to work to help support the family. Thomas G. chose the trade of printer and book-binder, serving an apprenticeship of seven years, and learning thoroughly every inch of the business from top to bottom, in both branches.

Early in 1854 he came to Rochester, N. Y., where he had relatives; and before noon of the day of his arrival he secured a permanent situation in the job-room of The American. Within two months he took the position of assistant foreman on the Rochester Democrat, then the leading Republican paper of Western New York. Later on he spent seven years editing and publishing a religious paper, called the "Bible Expositor and Millennial Harbinger," in New York, and published a score or more of theological works, some written by himself. In 1864 he moved it to Illinois, sold out the business, and, for a "rest," took his family to England. Returning in 1869 he located at Cedar Rapids, Iowa, where he published and edited its first daily paper. In 1872 he sold this and removed to Chicago, where he embarked in the business of publishing The Illustrated Journal, a literary serial printed in the highest style of the art, and magnificently embellished. The panic of 1873 ruined this luxury, bringing upon him a loss of over $20,000.

In 1873 a friend introduced him to the Rev. W. F. Clarke, who wanted to dispose of his interest in the American Bee Journal, which interest was one-half, subject to an unpaid contract. This he bought, and afterward the interests of F. Grabbe and Geo. Wagner, thus becoming the sole proprietor. For a man not afflicted with the bee-fever, in cold blood to pay more than $2000 for the simple "good-will" of a paper with no printing-office or supplies of any kind, shows an unbounded confidence in the future of bee-journalism. Few men, under the same circumstances, would have achieved his success. For three years he employed successively as editors Rev. W. F. Clarke, Mrs. E. S. Tupper, and Dr. C. C. Miller, meanwhile applying himself to the study and practice of bee-culture, increasing his apiary from three colonies, purchased for experimental manipulation, to more than 100 colonies in 1879, when he disposed of them because troublesome to surrounding stores.

With a positive dislike for financial transactions, he is fortunate in his son, Alfred H., who has ability in that direction. Besides his son he has two daughters, all married, and five grandchildren.

In 1879 he went to Europe, at his own expense, as representative to the various bee-keepers' societies, and attended conventions in England, France, Italy, Austria, Germany, etc., and was awarded several gold medals for exhibitions of American apiarian implements.

In no one thing has Mr. Newman shown the persistence with which he follows up any matter he undertakes, more than in his fight against adulteration, and in connection with it what he so constantly calls the "Wiley lie." Prof. Wiley, with all the weight of his official position under government, perpetrated the "scientific pleasantry" that comb honey was manufactured without the aid of bees. Far and near it was copied by the papers, the Professor looking on complacently at the mischief he had wrought, without offering a word to stop its course. Mr. Newman demanded a retraction, with no success, for a long time, but he kept up the warfare, denouncing the falsehood with ever-increasing vigor, using such strong language, and such bitter denunciations that one could hardly withhold sympathy for the poor Professor, so mercilessly belabored. But it is probable that nothing short of such vigorous language would have wrung from Prof. W. a tardy denial of the truth of his statement and a mingled attempt at apology and self-justification.

Notwithstanding the use of vigorous language on the printed page, in his attacks upon that which he deems unjust or false, in personal intercourse Mr. Newman is always the courteous gentleman. Hardly up to medium height, he is of strong build, and of active temperament. In convention he is a good presiding officer, and an easy speaker, sometimes rising to flights of eloquence on themes which, treated by others, would be but commonplace. C. C. MILLER.

Probably the majority of our readers will best remember Thomas G. Newman as editor of the American Bee Journal. He was our honored predecessor, relinquishing all connection with this journal June 1, 1892. With the exception of about one year of the eight preceding that date, Mr. Newman was our employer, and he was a good one, too. As we look back now upon those years, when we were getting hold of the ins and outs of both the bee supply and publishing business, we wonder that he could have been so uniformly patient and courteous, when we must have been exceedingly trying many times. But he was ever the same, though often suffering with physical ailments and burdened with business perplexities and cares.

Mr. Newman published the American Bee Journal for about 20 years, taking it at a time when the bee-business was practically "in the beginning." We believe the paper then had less than 800 subscribers. When he left it it had 5000. He was a tireless toiler, and took great pride and interest in his work. He was fearless for the right, and did all he knew to do in order to make the American Bee Journal of the most value to its subscribers. It was no easy task for us to follow in his footsteps, as we were then wholly unknown to the bee-keeping world. But under his direction and training for years, we were daring enough to make the attempt, even though it was a risky thing for us to do.

Mr. Newman was for two years President of the National Bee-Keepers' Association, and for about 15 years General Manager of the National Bee-Keepers' Union, which did so much to secure for bee-keeping valuable decisions and precedents in law for the protection of the industry. For years he filled the office of General Manager without remuneration, except the feeling of satisfaction that comes from knowing that one's work is done to the best of one's ability. But he also had the satisfaction of knowing that his efforts were not only successful, but appreciated by bee-keepers.

For the past seven years Mr. Newman has resided in California, where he went partly on account of his wife's health. We believe Mrs. Newman was greatly benefited, but not so Mr. Newman. For several years preceding their departure for the "Sunset State," he suffered much from la grippe, from which it seems he never fully recovered.

Thomas G. Newman is gone. The old-time leaders in the bee-keeping world are fast passing away. Chas. Dadant, Dr. A. B. Mason, John H. Martin—how rapidly they are going from the field of action. Naturally, in Mr. Newman's case more than in any of the others who have preceded him, do we feel a deep personal loss. He was our intimate friend for years, and even after we were separated thousands of miles, we still kept in touch by correspondence.

Mr. Newman's host of bee-keeping friends will look upon his picture and read these few memorial lines with sadness. They knew him well. He helped them fight their battles and win their victories. He may have made a few enemies—but who that stands for anything worth standing for has not? But Mr. Newman never held a grudge against a mortal man. He was ever kind and forgiving, and ever strove to live by the Golden Rule. In business he was an honest man; true to all; and leaves a rich moral heritage to all who knew him.

Our readers, we know, will unite with us in extending to Mrs. Newman and family sincerest sympathy in this their time of bereavement.

Taking Bees Out of the Cellar.—Are you making any experiments in the matter of the time of taking bees out of the cellar for a flight and then returning them? Some advocate taking out in March and leaving out just long enough for a flight before returning. Others say take them out in April about two weeks before time to take them out for good. If you experiment at all in the matter, don't go into it in too wholesale a manner, but treat at least a part of your colonies, if not the greater part, in the manner you have heretofore been in the habit of treating them. Only by comparison will you be able to judge as to the best way. Then keep watch as to which colonies seem to be in best condition at different times, especially at the opening of the harvest, and please report.

◆

Those Who Have No Foul Brood.—Probably not one out of ten, possibly not one out of a hundred, of those bee-keepers who have not personally suffered from foul brood, have sufficient interest in the matter to have read enough on the subject to give them anything more than the most vague idea about it. Then when the disease actually appears in a colony belonging to such bee-keeper, he allows the disease to progress steadily, in serene unconsciousness of any danger until it has spread to many or all of his colonies, and has become of such virulent type in some of them that he can no longer be blind to it. Then he is in a panic, not knowing what to do, and wasting still further time in trying to find out.

The wise bee-keeper, even the veriest novice with a single colony, should know enough about the disease to spot it on its first appearance. He should also know enough to act at once when he does spot it. He should know enough not to be unduly excited when he finds something unusual in a colony that is not foul brood. So the advice can hardly be too strongly emphasized, to read up on foul brood, even if there is no expectation of ever seeing a case. Have ready for immediate reference whatever literature you may have upon the subject, so that no time may be wasted in looking it up in case it should suddenly be needed.

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Formalin to Kill Foul Brood.—It will be remembered that experiments over in Canada seemed to show that the bacilli of foul brood, and even the spores, were destroyed by exposure to the fumes of formalin, whether they were in the larvæ, the dried cells, or in the honey. This is a matter of thousands of dollars, for if the effect of the fumes are such that a comb from a foul-broody hive can be entirely cleansed from all traces of the disease, then all the brood-combs that otherwise would be burned can be saved. As a practical contribution to the subject, the following from C. H. W. Weber appears in Gleanings in Bee-Culture:

> You may recollect that, when in Denver, I was talking to you about killing the foul-brood germ by fumigating it with formalin gas, by Prof. Harrison's method. I mentioned to you that I would experiment with this fumigating cure just as soon as I arrived home. With the assistance of a bee-keeper I began operations immediately. This gentleman had a hive infected with foul brood. We took the infected frames from the hive and placed the bees in another hive. We then fumigated it with the formalin gas, and, when disinfected, replaced the infected frames in the old hive. We then shook the bees back on to the original frames. The result was, that the colony cleaned up the combs nicely, and a few days later the combs were filled with eggs, and, later, larvæ, the latter being perfectly white, and no signs of foul brood since in the colony.
>
> Later in the season I tried this method for friends who had colonies afflicted in the same manner. As the season became too late for brood-rearing, I could not ascertain any results. About three weeks ago I sent two frames, which had been badly infected (but which I had previously fumigated, to kill the spores of foul brood), to Prof. Dr. Guyer, of the University of Cincinnati. I requested him to endeavor to restore life to the foul brood, which he promised to try to do. A few days later I sent him another frame infected with foul brood (this frame I did not fumigate). To-day, two weeks after, I visited the professor again, and he reported that he had made about 20 trials, all told. The frame *not fumigated*, he says, flourishes with foul brood. To the other frames, which were *fumigated* by this process, he said it was impossible to restore any signs of life. He still has part of the *fumigated* frames, which he will experiment further, and will then report results. I will acquaint you further with any future results we may secure.

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Shaken Swarms in Australia.—The editor of the Australasian Bee-Keeper advises against the practice of equalizing colonies and then shaking a swarm from each, regardless of preparations for swarming, but favors shaking each as soon as preparations for swarming are found.

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Filling Syrup in Combs.—S. E. Miller says in the Progressive Bee-Keeper:

> I am surprised at Editor Doolittle (page 1014, Gleanings for Dec. 15). In advising how to fill combs with syrup, he says:
>
> "To get it into the cells, pour in a fine stream from a dipper or some utensil having a spout which should be held a foot or more from the comb," etc.
>
> Now, Friend Doolittle, you have likely filled many more combs than I, but I can tell you a better way. Take a fruit-can, about a 3-pound can—one that has been used and cast aside is good enough—punch the bottom full of small holes, about such as a three-penny nail will make. If the holes are punched from the inside the syrup will flow more freely than if punched from the outside. An old file, with the point intended for inserting in the handle, shaped to the proper form and size, makes a puncher for the purpose.
>
> Having your perforated-bottom can prepared, lay the comb on its side in the bottom of a tub. Hold the can about a foot above the comb with the left hand, and with the right hand take a dipper and fill the comb with syrup. Pass the can over all parts of the comb until one side of the comb is filled, when the other side can be turned up and the operation repeated. If there is about half an inch of syrup in the bottom of the tub, it is all the better, as it will prevent the syrup from running out of the side first filled. You see, by this means, we have 100 or more streams of small size instead of only one.

Very likely Mr. Miller will be thankful for suggestion as to still further improvement, even though the improvement refers to minor matters. Instead of the can being held a foot above the comb, let it be at least three feet above it. If the syrup be allowed to fall from a height of an inch, in spite of its being in a fine stream, very little of it will find its way to the bottom of the cells, and in a little while there will be a layer of syrup all over the comb, leaving the cells still filled with air, and any syrup poured on top after that will simply run off. When held a foot above the comb, the result will be better, but still it will not work so well as when the syrup falls from a greater distance. The momentum gained by falling from a greater height is the same in effect as making each drop heavier, making it go with a rush to the bottom of the cell. For, although the syrup may leave the can in a fine stream, it goes a very short distance before separating into drops.

It is important that the syrup be hot—just as hot as it is possible to have it without melting the comb. The hotter the syrup the smaller the drops.

Holding the can three feet above the comb is tiresome. Easier and *better* work can be done in this way:

Punch three holes at equal distances in the upper edge of the can; tie the end of a string in each hole, and tie the other end of each string to a nail in the ceiling, letting the three nails be perhaps three feet apart. Then no weight comes on the hand, and all you have to do is to steady the can and move it about where you want it.

◆

The Dealer's Rights—Do they Include that of Erasing the Producer's Name and Puting on His Own? is the heading of an article in the Bee-Keepers' Review, in which the writer, J. E. Hand, says:

> "How is a honey-producer going to advertise his business, and work up a trade for his product if he is not allowed to place his name on his honey? It has taken me years to learn how to produce a real fancy article of comb honey, and I would be very foolish to give to Mr. York, or any one else, the benefit of my experience, simply because he happens to buy my honey. He has a right to place his name on the package as the seller of it, but not as the producer, as this would simply be lying, and an injustice to the producer. I would not sell a pound of honey to any man who would object to my name and address somewhere either outside or inside of every case, and always outside of every crate. Any one who is smart enough to produce a fancy article of comb honey should be smart enough to sell it himself without giving his dearly bought experience to some one who could not produce a pound of honey to save his life."

In a footnote Editor Hutchinson says there are two sides to the question. It is entirely proper for a producer to desire to establish a reputation for his honey, and to have his name on the package, and such a producer should sell to some one who is making no effort to build up a special trade; but with regard to those who are making such effort, he says:

> "If I were at work building up a trade here for honey, I should wish to have my name on every package, and not that of the producer. That would be a natural feeling. If I spent time, and money, and thought, and energy, building up a market for honey, I should wish to reap the reward. I should not advertise that I was the producer of the honey that I sold. I should impress upon my customers the idea that I was an expert judge of honey, and took great pains to secure that which was of excellent quality and absolutely pure. I should take great pains to live up to my professions, and always furnish an excellent article, and thus lead my customers to believe that when they bought a bottle of honey, or a section of honey with my name on it, they could rest assured that it had my guarantee, and that it was all right. If I should send out honey having upon the packages only the names of the different producers of whom I bought honey, I would never succeed in building up a demand for the honey that I sold. One day I might be selling Smith's honey, the next day Brown's, and so on.

◆

A Mild Winter is the term that must be applied to the one just closing, unless March does some savage work in the way of cold weather in the next few days.

Convention Proceedings.

Chicago-Northwestern Convention.

Report of the Chicago-Northwestern Bee-Keepers' Convention, held in Chicago, Dec. 3 and 4, 1902.

BY OUR OWN SHORTHAND REPORTER.

(Continued from page 165.)

Pres. York—I would like to introduce Mr. Frank B. White, of Chicago, a friend of poultry-keepers and bee-keepers. He is a very white man, as you will see.

ADDRESS BY MR. FRANK B. WHITE.

I am grateful to your president for giving me this opportunity to speak to you. I hope I am a friend of the bee-keepers, the producers of that sweet which we like to eat. Mr. York can testify that I eat some. I do not know what I can say that would be of interest to you. I am not familiar with the bee-keeping business to any great extent. I might offer a suggestion or two as to how you could increase the demand for your product, and if I might have about five minutes of your time I would like to do that.

I had the pleasure, yesterday, of addressing the State Horticultural Society, at Minneapolis, and I was pleased to see the interest they took in what I had to say about the handling of fruit.

I want to suggest to you that I believe, without doubt, that there is an opportunity of enlarging the demand for your product. If you expect to get a larger price for your honey you must increase the demand in some way. I want to call your attention to the fact that but few of the hotel menus contain the name of the product you produce. Other edibles are mentioned there, health foods by the score, and any one can go into the health-food business if he has a flour-mill and sawdust at hand! You can sell your product with a little advertising. Now, if that can be done with something we have no faith in, why can't it be done with a good, substantial sweet article like honey? I believe it can. I believe the list of things we eat should contain honey as well as meat, vegetables, and fruit. California found herself without a market for her oranges. They were producing more than they could dispose of. At the present time the only thing lacking is transportation, and the distribution of the product doesn't worry them at all. It is simply because they unitedly, as a State, used a judicious system of advertising. I maintain they might have gone on and created a further demand. I have no doubt in the world but what the people could sell many times what they do if they would get in line. Now, you producers of honey ought to pay attention to the distribution of your product along that line.

I do not know just what the object of this organization is, other than to teach each other, as you have been trying to do in the discussion that I listened to for the few minutes that I was here; but it seems to me that you left off your discussion at the very vital point of marketing your product in a way that seems to me should be handled by your organization.

Now, I have no doubt but what many of you are shipping your honey to Mr. York. He is making an effort to create a demand for honey in this city, but there is a great deal of waste energy and waste effort simply because we do not avail ourselves of the opportunity afforded by judicious advertising along the lines of shipping and packing, etc. Now, without running into opposition with Mr. York, if I were a honey-producer near a city or village of two or five thousand people, I believe that I would sell every pound of honey that I produce right in that community, and if I could not do it with the present demand, I would try mighty hard to make a demand. There is many a neighbor of yours who would eat honey if he knew how good it was. It simply means he hasn't had a taste. He will buy patent medicines and patronize mail-order houses, but he wouldn't send away for much honey. I don't know whether any of you have ever tried to acquaint your neighbors with the fact that you have honey for sale. That is the thing you ought to do, and sell your honey at home, then any that you have to send away will bring you a better price, thus making a demand for your product at home, as well as away from home.

Out a little ways from Chicago there was a man who grew one year 40 bushels of gooseberries. Gooseberries were selling at the store for six cents a quart, and the good wife said she was not going to prick her fingers, nor have her children prick theirs, for six cents a quart, so he went to the newspaper office, inserted a small notice which cost him 75 cents, and then went away for two days. When he returned his good wife met him and said: "Well, I am glad you came. I haven't done anything since you went away but answer the telephone. I have sold all the berries, and could have sold twice as many." She got 12 cents a quart instead of six for them. He advertised fresh berries right from the bushes, and he commanded 12 cents for them.

Now, I believe you can create a demand for honey at a better price if you will do a little advertising. If I were a producer of honey I wouldn't let a pound of honey go away from my place without my stamp was on it, so that they would have to read that every time they took a piece of honey; but I don't know any patent that you can get to have the bees to stamp it on. Mr. York doesn't offer any honey that he doesn't stamp very plain. The little pound box—I would have my name on all four sides, all around. I don't know but what I will go in the honey-business. If I do, and you see "White's Honey," you will know that I am doing what I say. I would expect that my bees were going to produce just as good honey as anybody's. Mind you, I claim that the thing that is not good is not fit to advertise. My honey is just as good as anybody else can produce, and better. The article itself is the best advertiser in the world. If it is good put your own stamp on it, and let that stamp be big and plain.

Dr. Miller—If you send to a commission man, or some one else to sell, he will scratch your stamp off.

Mr. White—I would have it burned in so deep that he couldn't scratch it off. Don't let him come that on you, Dr. Miller.

But this is all foreign to my work. I can't go out and advertise your product at all, but I do delight to see, when I go to a fruit-store, something that indicates where it comes from. The fact of the matter is, those of us who have to buy things shipped in here, if we get hold of a good thing we want to be able to get it again, and if it was marked we would know what to call for. We buy our butter by name. We call for that creamery butter because we know that that butter is all right. The fact is, before that thing was heard of all butter was alike to us who had to buy it here in Chicago.

Yes, this means something, and it certainly will mean something to you, men, if you will follow that suggestion. I wouldn't recommend that the members of this Association produce anything but honey that is first-class, and then every one of you affix your name and the fact that you are a member of this organization—it is a stamp of genuineness, and it will overcome a lot of this stuff talked about as molasses honey.

Something of that kind is the best thing that I know of to create a demand, and those of us who want a good thing will look for that article.

Why do you let the other fellow dictate terms to you? Why not make the demand for your article at the price you think you ought to have. If you ship half your honey to Chicago, Mr. York will be making more money. The honey you sell at home you can sell for a good, round price, if you create a demand.

I don't know whether there is anything else I have to say. That is all I think of, anyway, Mr. President. Thank you.

Pres. York—Evidently *I* didn't tell Mr. White what to say. I will explain it all to him some day, and hope he will come again. We will now go to the next question.

FEEDING BOILED GRANULATED SOUR HONEY.

"If I boil granulated sour honey will I be able to feed it to the bees?"

Mr. Niver—Is there any such thing?

Pres. York—Yes, sir.

Mr. Wilcox—I would like to have whoever answers that question say whether after the bees have stored it it will be sweet honey or not. I don't know whether it will be any better after the bees have taken it and re-worked it.

Mr. Moore—There is a distinction to be drawn there. I have a notion that the candied part is not sour, and that the act of melting it, or, perhaps carry it a little farther wouldn't say boil it, but when you melt honey somewhat old and sour you will find a good deal of froth that comes out from the honey. This sourness, I am of the opinion it could be brought to a heat enough without boiling the honey so it wouldn't be sour.

Mr. Whitney—Did you try it?

Mr. Moore—I have melted a great deal of candied honey. I have melted some lots that would pretty near fill this bill of candied and sour honey, and I feel sure, in some cases, the heating without boiling would pretty nearly sweeten it. I am quite sure the boiling would sweeten it, and then you can have it for summer food.

Mr. Wilcox—I wish you were sure you are right about that. I had a barrel returned to me once, and I had it almost to a boiling heat.

Mr. Moore—What proportion of it?

Mr. Wilcox—Very thin honey to candy, consequently it doesn't become very solid, and I put in saleratus and boiled it, skimmed it thoroughly, and then tried it on my own table, and it was still sour. That experiment satisfied me.

Mr. Moore—How thick was it after it was all done?

Mr. Wilcox—About as thick as ordinary honey.

Mr. Moore—Did you try it on the bees?

Mr. Wilcox—I didn't go so far. I couldn't get them out, and if any one can I would like to know how.

Dr. Miller—Answering perhaps what is desired by the questioner, that is, as to whether that honey can be rightfully and profitably fed to the bees, I should say that in the early part of the season it could be fed and turned into brood very profitably. I believe the bees will take it and use it nearly as well as straight honey. There is something, though heating honey that is a little bit sour will improve it. Possibly it might be so sour that it could not be improved.

Mr. Purple—I am sorry to say that I haven't had quite experience enough in this to go as far as I would like, but I fed several pounds to some of my bees, black bees, this fall. They had given me all they had stored, and I couldn't do anything else except extract it and feed it back. I fed back sour honey boiled, and boiled hard. It will froth over, but if you boil it well it will stop, and just let it settle down, and it wasn't sour. It looked like, say the consistency of malt or boiled cider, but it was sweet, and wasn't sour. I was looking at a colony last Sunday, that had nothing but that to live on, and there were only half a dozen dead bees in the hive.

Dr. Miller—Wait until spring.

Mr. Purple—That's what I want. I am sorry I can't report more fully. These colonies didn't have a pound in the hive.

Mr. France—Are those bees in-doors or out-doors?

Mr. Purple—In-doors.

Mr. Moore—I suppose you know the process of turning sweet into vinegar. Every lady, when she makes bread, raises it, knows that there is alcohol formed in there, and that is largely gaseous—the generating of the sugar into alcohol. Now, when it starts to ferment the sugar has been turned into alcohol, then the alcohol turns into acid vinegar. Now boil this and a froth is caused by the gaseous alcohol. That's why boiling improves it, and whether it is cured entirely or not depends on how far this turning of the sugar into alcohol has progressed, and on certain chemical changes. When a chemical change has gone on, nothing will bring it back to the orignal state. I should think it would be perfectly safe for summer feeding, but for winter feeding I think you would be taking the lives of the bees into your own hands.

Dr. Miller—The one general remark about feeding this sort of honey, in no case would I ever allow it to be used for winter stores. I should be very much surprised if Mr. Purple wouldn't settle down to the opinion that he never wants to feed in the fall anything but good, sweet honey. In the summer bees might work on boiled vinegar, and make some use of it when they are flying every day, but in the fall I wouldn't work over any honey.

Mr. Wilcox—Is that equivalent to admitting that the bees do not make the change, and make sweet honey of it?

Mr. France—Right along this line I agree with Dr. Miller. I find, especially in our State, that bees that have been wintered in-doors, and have been fed this sour honey, although reboiled, it is dangerous; but where they are out-doors you have more chance of their sweetening it up; but a good, wholesome honey is by far the best.

Pres. York—I want to introduce Emerson T. Abbott, of Missouri. They had a wreck on the road he came on, and he was delayed in getting here.

Mr. Abbott—I wasn't in the wreck, but the other fellow was, and we had the pleasure of sitting for 6½ hours waiting to know whether we would ever get out of it or not. If you have ever sat that way you can imagine how we felt. We were thinking about you. I am glad to see you all, glad to be with you, and hope to have something to say later.

(Continued next week.)

Contributed Articles.

A "National Honey Exchange" Outlined.

BY G. E. DUDLEY.

1. THERE should be a great central organization which we will name "The National Honey-Producers' Exchange," with a General Manager to keep in touch with the State and local associations in order to send their honey to the various markets of the country, thus avoiding glutting the central markets as is now the case.

2. The National Exchange should employ *as their agents* the Citrus Fruit Exchange, at the lowest possible rate obtainable, to gather in the honey from all sections of the country not easily reached by the National Exchange, and sell the same in the best markets nearest to where it is produced; also, to handle such other honey as the Manager of the National Exchange might turn in to it if it should become necessary for him to do so.

3. State and local associations should be formed to grade the honey and ship it according to the rules and instructions of the National Exchange, or those of the Citrus Fruit Exchange, where it is more easy to deal with the latter. These State and local associations should, of course, choose local managers who should look out for home interests, and keep in touch with the General Manager of the National Exchange.

NOTES AND COMMENTS.

Each association shall have its stamp or seal to be used where the National association has no proper representative. Also each case of honey shall bear the number of its producer, so that poor honey can be traced back to the packer. When local associations can sell their honey at prices equal to or higher than they could get by selling through the National association, *they should be expected to do so.*

The Citrus Fruit Exchange having agents and buildings in nearly every city of the country, the National, by employing them as their agents, would be able to cover the whole country from the start, thus giving sections too remote from the National organization a chance to sell their honey through a proper channel.

When the National Association grows to cover the whole country themselves, they could drop the Citrus Fruit Exchange.

The National would establish agencies wherever desirable.

It seems reasonable that the new California National Honey-Producers' Association could make a proper bargain with the Citrus Fruit Exchange, and get in a working basis for this season. Let them harness the successful Citrus Fruit Exchange into their work, as their agents, and they will be a success from the start.

Will not the California National carry out this program?

Arapahoe Co., Colo.

Extra-Large Hives and Long-Lived Queens.

BY DR. E. GALLUP.

NOW, Yon Yonson, let me have a whack at you. You say, why not rear a queen in a barn, and then you could have one big enough for a pony to ride on. Well, you see that would not work. On the same day we took the honey out of the house, spoken of in another article, my son had the offer of a colony on the roof of a tank-house, providing we gave the man the honey. So my son brought the colony home on the wheelbarrow. They were in quite a large box. We transferred comb and brood enough to partly fill 3 frames.

Now, Yon, you can readily see they were in a barn, to all intents and purposes, for they could not concentrate the animal heat sufficiently to keep the wax soft enough to work it into comb, providing they gather enough nectar to manufacture the wax. Wax is secreted whenever bees gather more than they have place to store it, etc. They were in a semi-starving condition, for a part of the brood had perished.

Well, I put them into an 8-frame hive, adjusted a division-board close up to the 3 frames, fed them a pint of melted sugar, and they went to work. This was the middle of August; it is now Dec. 13, and they are a good colony. I have fed them in all about 15 cents worth of sugar, as they could gather enough to live on, but not sufficient to build comb. Whenever I inserted an empty frame in the center of the cluster, for them to fill, I fed them a pint of melted sugar, and the queen occupied with eggs every cell that was empty; the bees were compelled to secrete wax, as they could not get rid of it in any other way.

The queen was large and prolific. I used repeatedly to raise the comb from the hive she was on, and watch her hunt for a place to deposit her eggs, and see her extending at the rate of 5 or 6 eggs per minute from her abdomen. Mind you, that was the only colony I had in the yard, and no ready-made comb to give her. Now, I wish to ask you chaps that are afraid of a queen laying herself to death, How much more would it have shortened her life to have laid those eggs in cells, than it did to drop them on the bottom-board? At some future time I may have something to say on the subject of a queen shortening her life by laying too much.

A friend living at Tustin, paid boys 25 cents each for picking up some 50 swarms; he put them in common-sized hives, but used no division-board, and the consequence is, many of them are weak, and some 15 of the number "came up missing" entirely. Now, if he had used a division-board judiciously, all would have built up to profitable colonies. Now, Yon, you can see they were in a barn, to all intent and purposes, as they cannot build outside of the cluster of bees. Neither will the queen deposit eggs where there is not sufficient warmth for them to hatch. In building up small swarms to profitable colonies, if you have a good queen—and a poor one is not worth keeping, anyway, always use a division-board. Then insert your extra frames, ready-made comb, or foundation, in the center of the cluster; but do not move too fast or you may spoil the whole; keep the increase more than the decrease, and you will win in the end.

I once made 16 colonies from one, in Iowa, in one season. They built all their own comb, filled their hive with honey, and all came through the winter in splendid condition. Remember at that time I knew nothing of comb foundation, and I reared all my 15 queens by natural swarming, and all from that one queen, so all were good ones.

I am often asked how many colonies one ought to purchase to begin bee-keeping with. My reply is usualy one or two good colonies, and make the balance; in the meantime you will be gaining valuable experience.

I began bee-keeping in Canada 65 miles north of Vermont; have kept bees in Wisconsin, in Northern Iowa, and now in California. So I know all does not depend on locality, the kind of hive, etc. But the management has a great deal to do with success or failure in any locality, as well as the season. Bees are managed in these localities so as to be self-sustaining even in poor seasons, when you know how. I confess that bee-keeping in some respects is quite different here from what it is in the East. There, when you have hot weather you often have it hot and sultry night and day, while here in this beautiful valley it is not so. The sun may shine quite hot, but there is a splendid cool and refreshing breeze directly from the Ocean, so it is always cool in the shade, and always cool nights. In Canada, Wisconsin, and Iowa, I have sweltered in the daytime, and could get no real rest at night. I would get up in the morning all fagged out and completely exhausted; while here in the hottest weather we sleep a sound, restful sleep, and get up rested and refreshed and strengthened for our days labor. It is an old man's Paradise. You may go to bed at night thinking it may not be hot, and go to sleep under a very light cover, but I always have an extra cover at the back of the bed, so as to draw it over me before morning, if I need it.

Now, what I am getting at is this: You want and extra-strong colony of bees to store honey in the supers to good advantage. They may begin storing, but before morning they are compelled to withdraw and cluster closely around the brood, to keep up the necessary warmth, and that makes it late before they get back to work in the super. That is why I lost a fine batch of queen-cells in the wire queen-cell protector, although I placed them well in the center of the cluster.

A writer in the Pacific Bee Journal, who lived north of the Tehachapi Mountains, during a 3 days' cold north wind, stated that he lost fully one-half of his bees in the 3 days' blow. You see, they had to withdraw from the super and pack closely around the brood-nest in order to protect the brood. You see, Mr. Greiner, he jumped at that conclusion. No mistake about it. He had been extracting, and the supers were full of bees, but when he looked in the supers after the wind, and found them all empty of bees, he hastened to write about his bad luck. We cannot pile up supers here, to good advantage, 3 or 4 stories high, because if we open a place for ventilation at the top, it causes a cold draft of air like the draft up a chimney, and that compels the bees to stay below to protect the brood. Orange Co., Calif.

Shaken Swarms—Cause of Poor Queens.

BY GEO. W. STINEBRING.

I WISH to write a little in regard to artificial swarming, by shaking. I will just say that it is not new to me, as I have practiced it more or less for 30 years and have never failed to get as good a "swarm" as by the natural process, in fact it is very nearly the same as natural swarming.

My plan is to wait until the bees commence to swarm naturally, and then I go to the ones that I want to have swarm and open the hive, and look the frames over until I find the one that the queen is on, and set that frame in the new hive, place it on the old stand, and carry the old hive away a rod or so. And as I do this about the middle of a nice day, the most of the working bees are out gathering, and will return to the new hive. I also generally shake a part of the bees off 3 or 4 more of the other frames in addition to the one that the queen is on. A swarm made in this way is always sure to stay and be contented, and give no further trouble. The only trouble that I meet with now is that the seasons have changed so that is hard to tell what part of the year the harvest, if there is any, or the swarming season, will come in.

So far as the queen question is concerned that has been agitated so much of late, I am inclined to think the main cause of poor queens is either because they have been reared in poorly supplied nuclei, or by in-and-in breeding—quite likely both. As for my part, I have bought quite a number of queens, and never received very good ones, the best one that I ever had being away back in 1868. She was a pure Italian, issued with 2 swarms, mated with a black drone. That one gathered honey and sent off swarms when other bees were starving.

I also find that bees do not go as far to gather honey as most people think they do. About a mile, or nearly so, will cover most of the distance. I keep the most of my bees about two miles from home, and see quite a difference.

Wayne Co., O.

The Growing of Basswood Trees.

BY J. D. GEHRING.

IN his answer to "Wisconsin" (page 810—1902) concerning the propagation of basswood trees, Dr. Miller says, among other things, that seedling trees never live to the second year. He also says:

"This year I saw hundreds of them when they were 2 or 3 inches high, and I've just been out looking over the ground and I cannot find a single plant. What becomes of them is a mystery to me. Judging from the freedom with which these have sprung up, I should say it is best to plant in the fall [of the year], covering the seed from ¼ to ½ an inch."

"Wisconsin" should have been informed that success in raising of basswood trees depends somewhat upon the locality—even in the same State—because basswood trees do not grow naturally anywhere and everywhere, though they can be sprouted, if properly treated, almost anywhere.

Now, if I had "Wisconsin" to deal with I would talk to him about like this:

1. Plant your basswood seeds about the time when Nature plants them, and in the kind of soil in which they most readily and numerously "come up" and flourish into blooming trees. If there are basswood trees in the "woods" in your locality, you can easily find out what kind of soil they

flourish best in. Well, I advise you to plant the seeds in the same kind of soil, and no other—no, not even should you have to go a day's journey to get it, or get along without basswood honey.

3. I think this question would be properly answered by saying: A basswood tree is not limited to a specified number of years before it begins to bloom; that depends more upon soil, climate, local conditions, and—care, if "raised by hand."

The proper care-taking—the "nursing"—of the sproutings, until they begin to be large enough to take care of themselves when transplanted to their permanant location, is of so much importance that success depends largely upon it. One part of the process of nursing consists in transplanting the baby trees when 3 or 4 inches high, to a place suitable for them—a place where they will be sheltered from icy blast and scorching sun. And, wherever the nurslings may be put, be sure to *screen* them from rabbits and bovines.

Mulching must not be forgotten, but—look out for mice! Mice are also fond of basswood *seeds*, and are to a great extent responsible for the remarkable scarcity of volunteer basswood sproutings where flourishing mother-trees cast showers of seeds. Douglas Co., Kans.

❊ The Afterthought. ❊

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, O.

RAGE OF SWARMING IN CANADA.

Interesting to learn from the exceedingly well-informed Mr. McEvoy, that Ontario had its greatest rage of swarming last summer. T'other way in most places—yet similar cause. Very unpropitious conditions stop all swarming. A little better and there will be a few swarms. Somewhat better, but still rather poor so far as honey is concerned, and they may rear brood and young queens—and swarm and swarm and swarm—just because they can do that and can't do much else. When the very propitious conditions come they oft get interested in piling up the surplus and forget about swarming. Page 70.

VARIATIONS AND IMPROVEMENTS IN WORKER-BEES.

The theory which Stachelhausen explains on page 70 should have sober consideration, and not be poh-poned down—too near being the only thing in the field on a very difficult and important problem. When there are variations and improvements in the worker-bee *how can* these improvements be transmitted, since the worker has neither son nor daughter to transmit them to? I imagine that some readers do not even yet get the idea advanced by Mr. S. Let's start with the fact that certain worms can be cut in two in the middle and by healing of the wounds we have two worms instead of one. Next let us conjure up a worm of fine and remarkable qualities. One end lays eggs and the other end secretes honey. Both end eats, but sometimes the egg-laying end is also fed a-la-canary-bird by the other end—fluid circulation throughout the whole. How can our worm transmit its qualities—variations included? Same way as any other organism does, however that may be. Next our worm gets cut in two. Getting well all right, the two sections, for mutal help and advantage, continue to live in the same vicinity. No more commingling of fluids by way of a central waist; but the two parts mutually give each other abundant portions of the circulating fluid—*here alleged to amount to precisely the same thing.* Does it? Looks so. Mere fastening together doesn't seen to promise anything.

Now we do not know precisely and absolutely all that the worker-bees feed to the queen ("More things in heaven and earth, Horatio, than are dreamed of in your philosophy"), but the theory demands that we consider the interchange practically the same thing as if worker and queen were by a common waist nicely joined together as one being. In the latter case transmission of improvements would not worry us—why should it then in the real case, if the case is precisely the same thing practically? In other words, the queen and the workers, in the breeding season, constitute what is really one organism although not so visible. The result is that anything organic which affects any part of the organism affects the reproductive part also. Do I believe all this? No. What then? Well, as a certain fellow worker has been known to remark, I don't know.

MR. WHITNEY AND THE SISTERS' HAT-PIN.

And so Mr. Whitney is going to ornament his masculine head-gear with hat-pins, to furnish the bees with objects to attack, so they will not steer for his eyes. Ingenious Whitney! But if the sisters should take it as an affront, and get after him with the hat-pin a-la-bayonet, he'd prefer the bees. Page 78.

OLD COLONY OF BEES.

A log hive that dates back to 1821 is something we don't see in every apiary picture—and 90-year-old colonies are not at all plenty. But I note the language to be "only one is left" instead of only the original one is left. If Mr. Barb only means that the family of colonies has been kept track of and kept separate for 90 years, that does not amount to so much. Let up on the lines a little more and behold we all have bees thousands of years old. Pages 81 and 84.

UNCLE SAM'S APIARIAN STATISTICS.

And so Uncle Sam, in his last census, has actually got some State statistics about bees that *look* as if of some value, and not worse than worthless, as some of us would incline to expect. Here and there bees taken and here and there bees not taken, makes a queer result when you come to add it up. Having got begun, Uncle Sam may improve. Page 83.

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

Information About Bee-Culture.

Please send information regarding bee-culture.
Lake Co., Ill. LETITIA JONES.

Your letter is so vague it leaves one in the dark as to the kind of information you want. I don't know whether you are at present keeping bees or are thinking of going into the bee-business. If you will put your question or questions a little more definitely, stating just what you want to know, I will be glad to help you if I can.

If you wish general instruction in bee-keeping it could hardly be given in this way. Your best plan would be to get a good text-book and study it thoroughly. I will ask the publishers to send you a catalog of text-books, any one of which will be helpful.

Early Spring Care of Bees.

Almost spring, almost time for the hum of the bees again. I always look forward with a great deal of interest to the time when the bees can be taken out of the cellar.

One of the first things to do after they are out is to see that they have plenty in their larder—this will also hold true for those wintered out-of-doors. Probably more bees are starved in the month of April than during the whole of the preceding winter.

It does seem too bad to get them through the winter all right, let them start a big lot of brood, and then let the whole business die of starvation.

You can lift the cover, look over the tops of the frames without lifting any out, and if you see sealed honey there is no immediate danger. If you don't see any sealed honey it looks suspicious, and you would better examine further by lifting out the frames. Then supply their wants if in need, or likely to be in need soon.

Spring is the time for watchfulness. Keep watch. Don't imagine that you have done your whole duty if you have seen to it that your bees have just enough stores for immediate use. If bees have a full larder they seem to have more heart, and go at brood-rearing with a will, and a big lot of brood means good, strong colonies ready for the harvest.

If you keep watch you will be surprised to see what a big lot of honey is used up by the bees in rearing brood.

It is nice to be able to take out empty combs and replace them with combs filled solid full of honey—the nicest and most satisfactory way of feeding that I know of. But you have to look ahead and have your combs of honey in order to do this. We have about 250 combs filled full of honey ready to give our bees this spring if they need them. I gave myself a little pat on the back as I wrote that, and thought, "Doesn't that sound well? 250 nice combs of honey." But let me whisper to you, I don't think we ever had so many before!

It takes a good bit of foresight and determination to have these combs of sealed honey ready for use in the spring. Make up your mind good and strong *now* that you will be ready *next* spring, if you have to set aside part of your colonies next summer to do nothing else but to fill up brood-combs full of sealed honey.

Preventing Bees from Flying!

One day last week I was called to the telephone, and a woman wanted to know what she could do to prevent her bees from flying out of the hives. She wanted to know if there was not some way by which she could fasten them in. She said many of them were dropping on the ground, and she was afraid that they were lost.

Poor little bees! Think of fastening them in the hives and preventing them from flying when it was the very first time since last fall that they had had a chance to fly! It was a beautiful day, too. The bees were, no doubt, having a grand time, and she little realized the good it was doing them. It is a little strange that while we have had an unusually mild winter, there was no day after November warm enough for a flight until Feb. 26. After such long confinement no doubt some bees would fly out never to return again, but where one was lost dozens would be benefited. I wonder how often we fail to recognize our blessings just as that woman did.

A Good Furniture Polish.

For a good furniture polish take one pint of turpentine, add two ounces of beeswax cut in small pieces. Use a tin basin and set it in the oven when not very warm, so as to melt the wax without burning the turpentine. Stir constantly. Apply to the furniture with a woolen rag, and rub vigorously with another.—Chicago Daily News.

Questions and Answers.

CONDUCTED BY

DR. O. O. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

Transferring Bees—8-Frame Hives.

1. I have a large box full of bees. I see in the book how to transfer, but this box has 2 holes in front, and a hole in the top, over which to put a box to get honey. Now if I stop up the holes in front and put a patent hive on top, and drum, would they go into the hive? The hive would hang over the box a good deal.

2. Why do the prime swarms always swarm again in a month after hiving?

3. I use the 8-frame hives. Are they too small for comb honey? I think I will put supers on, the end of this week, for the bees are very busy on almond, acacia, and gum-trees. You would think they were swarming to hear them to-day. I had to open all their entrances wide a week ago.

The worst time is in August and September; the wasps go for them so I have to close them up. If I don't look out they will turn the bees out of the hive. I am getting Holy Land queens to try, but will keep my brown ones for they do not get mad, and are fine workers. A man has some Italian bees a distance from here, but mine beat them, and store better honey and do better capping. I will send you a box this spring, to see how you like it. The people that I work for let me keep bees on their place, and give me two hours in the afternoon and most of Sunday, so I do well. I love bees, and watch them all day on Sunday, and fix them up. I got stung once on the chin, but it was my fault. I took a lot of bees out of a roof, as no one would tackle them, and I got 15 percent. I took them out in 10 minutes, they were under the shingles. I have another lot to take out when I have time. CALIFORNIA.

ANSWERS.—1. I'm afraid they would be rather slow about going up through so small a hole. Of course it would be no harm to try it, and if it didn't work then you could turn the hive upside down. It doesn't matter much if the two hives are not close-fitting. Smoke them a little at first, so they will not come out and sting you, and after they get fairly started they won't mind if the fit is imperfect.

2. Oh, they don't. In most places it is a very rare thing for a prime swarm to send out a swarm till the next year. It is something unusual if yours always do so.

3. No, there are probably more 8-frame hives used for comb honey than any other size. But for best success you will need two stories for a strong colony up to the time of putting on supers.

Using Unfinished Sections—Working with Tents.

1. I have about 300 unfinished sections left from last year, and do not know whether I ought to use them this season or not. I tried some last year but was not satisfied. Some time ago I read an argument between Doolittle and someone else, the former stating that it worked all right, while the latter said it was not. What is your opinion?

2. I see some advocate using tents while working with bees. Do not bees in trying to fly get entangled in the netting? ILLINOIS.

ANSWERS.—1. Of those who have made any observation in the matter, probably the majority have had the same experience as you, that unless the least and last bit of honey has been cleaned out by the bees before it has granulated, the sections will not be satisfactory to use again. There are some (but I think very few) who say they have had good results. Whatever unfinished sections you have at the close of the coming season, plan to have emptied out by the bees, and such sections will be of great value as baits at the beginning of the honey harvest.

2. I never had the slightest trouble of that kind, and I never heard of such trouble.

Lazy Bees on Old Combs.

1. I have several colonies of bees on very old and almost jet-black combs, that are very lazy. Could I get them to work by giving them fresh, clean foundation to draw out, or give them drawn-out combs?

2. When is the best time to do so, and how? WISCONSIN.

ANSWER.—1. No, indeed, don't get into your head the notion that old black combs make bees lazy. If they did, most of my bees would be very lazy.

2. The best time to get new combs drawn out is in the height of brood-rearing and harvest; but so long as combs are straight and in good condition I would never think of replacing them because they are old.

Making Increase by Dividing.

I have kept bees for 12 years, and had foul brood among them all the time. I lost all of them once—43 colonies. I lost the most of them a second time, about 30 colonies, before I learned that it was foul brood, and how to manage it. I have since made bee-keeping a success.

My neighbors would not do as I told them, and their bees died. I commenced the winter with 60 colonies, killing 12 that were infected. The bees went through the shingle roof of my honey-house, and robbed some of the infected honey.

1. I think the safest way would be to transfer the whole lot into clean empty hives. (I thoroughly boil everything that the bees have used). I would like to make 100 colonies from the 60, and would like to make as many as I can from a beautiful golden queen I have. My bees are mostly blacks and hybrids. Can I start a colony with each frames and starters, then carry away a strong colony when the bees are flying strong, and place the hive with the frame of brood in its place?

2. Will the frame of brood and flying bees make a good colony?

3. Should I wait for queen-cells to be started before doing this?

4. Can I successfully smoke or drum the bees out of the hive with crooked combs, without breaking the combs?

5. How can I tell when I have the queen out of said hive if I do not see her?

6. Would it be safe to leave the young hatching bees in such a hive to take care of the young brood, in swarming-time with a good honey-flow?

7. If so, can I shake these young bees after they hatch out, and start a good colony from them?

8. How long should I wait for the bees to fill up with honey before I shake them into another hive.

9. What is the best method of making them fill up?

10. Also tell me the best way to drum them into another hive, when the combs are too crooked to lift out. OREGON.

ANSWERS.—1. Yes, but it is hardly the best way.

2. It may, if the colony removed is strong enough, and if the work is done early enough in the season.

3. You may have to wait pretty late for queen-cells to be started. Let me suggest this: Begin in fruit-bloom to build up the colony that has your best queen by giving it brood from other colonies, the brood as well sealed as possible, adding more brood every few days. No

harm if you build it up three or four stories high. After you have built it up strong, let it stand a week or more, so there shall be no very young brood in the hive except from the choice queen. Then take three or more frames of brood with the queen and adhering bees and put them in a hive on a new stand. A week later you will find in the queenless colony a lot of sealed queen-cells. You can now take from this hive a frame of brood and bees and proceed with the plan you proposed, although it may be better to use two frames of brood for each nucleus. Let each one have two or more sealed cells, so that they may select the best, and see that the cells are centrally located so there is no danger of their being chilled.

4. Yes.

5. I don't know of any quick and easy way. If you give to the bees a comb or combs in which you are sure there are no eggs, the comb being in good condition for the queen to occupy, you will find eggs present within 10 minutes or so, if the queen is there. If you are experienced, you can also tell by the acitons of the bees whether the queen is present or not. If no queen is with them they will become very uneasy in the course of 10 or 15 minutes.

6. No, if no bees are left, a cool night would result in chilled brood, and much of the brood would starve before the hatching bees would feed them. Besides, the hive would be a good mark for robbers.

7. You may do so if you leave in the hive (or return to it) enough bees to take good care of the brood. That is, you can drum them, but not shake them.

8 and 9. You can't shake bees out of a hive unless you can lift out the frames separately. But you can drum them out, and they will fill up while being drummed, or you can wait two or three minutes for them to fill up after you have drummed perhaps five minutes, and then you can go on drumming.

10. Pound on the hive with your fists or with two sticks.

Basswood Trees.

Where can I get basswood trees or seed to start trees? How is a good way to start a few trees? and what kind of soil is the best for them? ILLINOIS.

ANSWER.—Any nurseryman can get them for you, and sometimes they are advertised in bee-papers. Any soil in your State that will grow other trees will probably do. It is a difficult thing, I believe, to grow them from seed, and a common way to get a start is to dig up the young plants where they have started in the woods.

Catnip and Sweet Clover—Moving Bees.

1. What is the best time of year to sow catnip and sweet clover seed in Kentucky, where it has to be sown on waste land and public highways, and depend on it being trampled in by stock.

2. Should they be sown in firm or loose soil.

3. Will catnip sown now, or in the spring, afford bee-pasture next season? Of course, I know the clover will not.

4. What is best, or will any bee-plant grow in the mountains? Near me are thousands of acres of what we call "knob-land," most of the timber has been cut off, leaving the ground pretty thickly covered with small growth of briars and brushes. Now what I want to know is, whether I can afford to spend a few dollars throwing seed on this waste brush-land. Of course, it will have to be sown down among the leaves to sprout it. Please advise me.

5. As per advice in the Bee Journal a few issues ago, I moved from their summer stands 2 weak colonies of Italians (the rest of my bees being black) to a place some 50 feet distant, and protected from the north and east winds. The weather has been bad, and bees have not flown since I moved them 4 weeks ago, until day before yesterday, and I found that many of my pretty Italians had gone back to the old stand, and finding it gone, had entered the nearest hives and were being killed. It's a lesson learned, however. But is there any way to prevent this? I shall have to move them from where they are now, back on the summer stand after winter is over, and I dislike losing any of them, for I want to Italianize my entire stock from these two colonies. Can you suggest how to move them, or what to do to cause them to return to the hive to which they belong? KENTUCKY.

ANSWERS.—1. Any time from the time seed is ripe in the fall till vegetation starts in the spring. Of course it will not be well to be too late in the spring, and at least for sweet clover it will be all the better to have the seed tramped in quite early in the fall. But you will hardly find the catnip seed succeed as well as the sweet clover when subjected to constant tramping. Catnip does better with some kind of protection, as in fence-corners and hedgerows.

2. Sweet clover seems to do best in very firm soil. I hardly think it is the same with catnip.

3. Catnip is a perennial, continuing permanently when once started. I think you can not count on bloom the first season, and I think it will increase in size and strength after the second year.

4. I should be very hopeful as to sweet clover, trying catnip on a less extensive scale.

5. Shut the bees in the hive before moving them, keeping them imprisoned a longer or shorter time according to the weather. If you leave them till the weather is quite warm, then a shorter time of confinement will do, for if confined too long they may smother. Even when it is quite warm, if you close the hive after they stop flying in the evening or before they fly out in the morning, there will be little danger of any harm from confining them till the middle of the day. You can move them any time while confined in the hive, perhaps all the better toward the close of their confinement, handling them rather roughly in moving, and pounding on the hive before opening. As an additional precaution you might set up a board before the entrance of each hive, so that the minute a bee leaves the entrance it will bump its head against the board and have its attention called to the change in surroundings.

Simmins' Forced Swarms.

Please inform me what Simmins means by giving the brood-combs removed to the "other hive deprived of part of its poplation." Does he mean in a second story, for there would be no room in the first if only one-half of the bees were taken away? Or does he mean to take half the bees, *with the combs*, from the second colony?

And does he mean in the first colony to fill up with as many comb-guides as there are brood-combs removed?

A neighbor loaned me a copy of the American Bee Journal, and the account of "Simmins' Forced Swarms" interested me.

NEW JERSEY.

ANSWER.—The first colony has all but one or two combs of brood taken from it, retaining all its own bees, and receiving half the bees of the second colony. Frames with starters take the place of the removed brood-combs. The second colony has half of its bees taken, but none of its brood, and it gets all the brood taken from the first colony. Of course, it must have a second story to receive the brood, and it will need one or two extra frames to fill up. This refers to what is said on page 67.

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FROM MANY FIELDS

Methods of Rearing Queens.

Our first instructions given by M. Quinby were very economical. He said just as good queens could be reared in full colonies. Having full confidence in this veteran in bee-keeping, I followed his directions, but from lack of experience I was not as successful as I might have been. So I concluded to try a larger comb, 5x8 inches. These were more successful, and having had more experience, I succeeded in rearing some fairly good queens which were used to Italianize some colonies of common bees. But when the honey-flow ceased, these small colonies soon became destitute of honey, and if not watched and fed would swarm out about the time queens were old enough to lay, or before. These small hives do not hold bees enough to keep the temperature at the proper degree, and the queens may suffer from cold if a few rainy days come.

At the present time queens-cells are started in full, strong colonies, and no combs are

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12A3t **G. W. PETRIE, Fairmont, Minn.**

used in the yard smaller than 6x12 inches, and 3 or 4 are used in the hive for the queen to hatch and become fertile.

I have no trouble to rear queens that are prolific; in fact, we get the best results from a moderately prolific queen, one that will just keep a 10-frame hive well stocked with brood and bees, and not get the swarming fever.

I cannot understand why Dr. Gallup has had so much worse luck in buying queens than anyone else. I have purchased quite a number of queens, and have had but one that was not satisfactory.

I am feeding some light colonies syrup made from sugar and honey. They are in the cellar. I will report results in the spring.

Page Co., Iowa. J. L. STRONG.

A Correction—Dr. Gallup Sick.

Tell "Porto Rico" that I measured the banana leaf with a square and pole, and by some mistake the American Bee Journal had it 5 feet and 7 inches, instead of 2 feet and 7 inches, I believe, or perhaps it was 3 feet and 7 inches. I made a memorandum of it at the time but lost it, and the frost has killed the plant.

I am very sick, and don't expect to get well.

Dictated by DR. E. GALLUP.

Orange Co., Calif., March 9.

[We hope Dr. Gallup won't get discouraged. We know he is not as young as he once was, but in that land of "The Fountain of Youth" where he dwells, we hope he may live and be happy for many years yet. Still, when one is around the 80's as is Dr. Gallup, he naturally would not expect to be spared much longer in this world.—EDITOR.]

Bee-Keeping in Oregon and Washington.

On page 58 is an inquiry which I wish to answer to the best of my ability.

In the first place, Oregon and Washington are divided by the Cascade Mountains into two distinct climates. That on the east side of the mountains is dry and cold, more like Kansas and Nebraska, and is called "Bunch Grass," while to the west is a warm, wet climate, and is called "Web Foot," and as space nor time will permit me any more than to take up one section at this writing I will proceed to tell something of "Web Foot."

During January, February and March it is rain and snow at least three-quarters of the days. April is generally over one-half rain. May, showers; June, principally good weather; July, August, and most of September dry without rain; the latter part of September and October, fine fall weather. November and December are rain, and some snow about Christmas.

Now, as to the bees: In the Willamette Valley they start off well in the spring, but are not able to keep it up, as there is too much acreage in small grain, so the bees fill up their hives off of dog-fennel, and other very poor honey during the latter part of the year. And I wish to say that I have an out-

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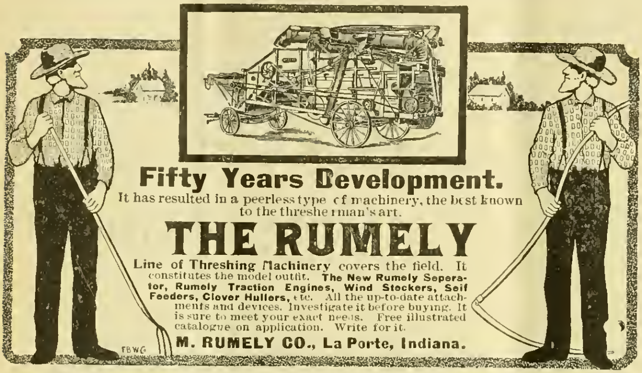

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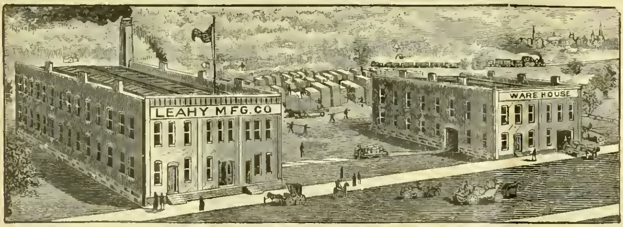

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yard in the Willamette Valley that I propose to move to the mountains in the spring, for this very reason.

The mountains are fine for bee-pasturage in a great many localities, but the weather is somewhat worse, and I wish to say that in this locality the black bee is by far superior to the Italian, as she will sleep quietly while it rains, and is ready with a hive full of bees when a good day comes; while the Italians will push out and spring-dwindle until there is nothing left of them. Then, again, the Italians are more subject to dysentery, as they gather so much poor stuff in the fall that the blacks won't touch.

In the mountain the first is pollen from hazel, then come soft maple, vine-maple, dogwood, blackberry, raspberry, and the most important is Chittim or Cascara (which equals the basswood in yield of honey for Oregon), then comes a wonderful yielder known locally as "fireweed."

The market is good for anybody who will sell and deliver his own honey, as it sells readily at from 10 to 15 cents per pound, or, in other words, extracted honey sells at 10 cents per pound, chunk honey in buckets at 12½ cents, and nice white sections at 15 cents.

I speak from experience, being a bee-keeper and surveyor, having traveled over a large portion of this country, and I wish to put in a word of caution right here. that is, be careful in locating, as a few miles makes a great difference in climate and pasture. Then, again, if you wish to keep many bees in any locality, be sure you sow plenty of white clover besides. GEORGE B. WHITCOMB.

Linn Co., Oregon.

Results of the Season of 1902.

I started in the spring of 1902 with 93 colonies, and the bees did very well for a few weeks, but it got very dry, and I had to feed my bees up to June 5, in order to keep them from starving, but on June 5 they got their first honey, and kept up until Nov. 10. I got 20,100 pounds of honey, and increased to 187 colonies; 6000 pounds of it was in Danz. sections, and 14,100 was extracted, all very good. The bees are doing nicely. I finished extracting Jan. 29, 1903, and the bees brought in the first pollen Feb. 1. I examined the colonies, and was surprised to find from one to six frames of brood in nearly all.

The elm trees are blooming, and the maples are nearly open. If we do not get a very cold and backward month now we will have early swarming, and the way things look now we will have a good honey season.

The best colony gave me 10 32(4x5)-section supers of very nicely filled honey. The best colony I run for extracted honey stored about 400 pounds. Now, had I not better figure

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how much 20,100 pounds will make to the colony, or there will be another round-up like two years ago, and then not know for sure how much I had per colony? As near as I can figure out, they averaged a little better than 213 pounds per colony, which I think is very well. I got about 225 pounds of beeswax during the season.

The Danz. hives and 4x5x1$\frac{3}{8}$ sections have come to me to stay; they are the hives for comb and extracted honey. F. J. GUNZEL.

Poinsett Co., Ark., Feb. 2.

Dividing to Prevent Swarming.

I notice in the Bee Journal quite a lot about dividing colonies of bees in many different ways, but all arriving at the same result—preventing swarms. Now, if all used the Heddon hive for increase, they would find it easy work. I don't need to move a frame or shake a bee to make a new colony. Just smoke a strong colony enough to drive the queen into the upper story of the Heddon hive, then remove the upper half to a new stand, and place it on another empty Heddon with starters or empty comb; the same with the colony on the old stand, putting both empties under. If the queen is left on the old stand they are more liable to rob the new colony, but, if this happens, exchange places, and there will be no fighting, and in a few days it is hard to tell which colony is working the stronger.

I also noticed that some doubt what I mentioned last summer in regard to bees disliking black. I wish those having cross bees would try the different colors in dresses and then report later on, whether the bees make a distinction.

Last summer a beginner transferred a few black bees; they went to robbing, and nearly all went into one colony, but no fighting. If I had been there I would have exchanged hives often enough to have had them all even. The advice given was a little different, but mine would have been too late.

SAMUEL HEATH.

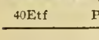
Armstrong Co., Pa., Feb. 2.

Bee-Keeping in Northern Ontario.

You say the columns of the Bee Journal are open for the best ideas of interest to beekeepers. I find it interesting, and also notice that the correspondents tell plain facts about bees and honey.

I am surprised at the statement that you are troubled (in the States) with so many insects, also foul brood, in connection with beekeeping. In this part of Canada we have no foul brood or insects. and no dwindle. When our bees are put away in the fall we never see them until next spring, when they come out in millions, strong and healthy, and every bee on the offensive. There is a right and a wrong way to keep and handle bees, and, if not properly handled, foul brood and insects will attack the colonies.

It is said that the honey crop has been very poor with our American cousins. It has not been so with me where I live. I never had such a large quantity as the bees gathered last fall, hundreds of pounds from a few colonies. But every colony that I have is as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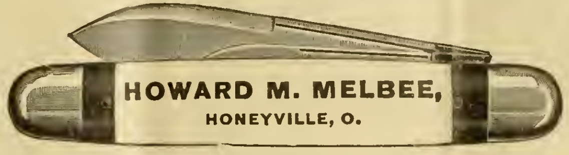
The Novelty Pocket-Knife.

Your Name and Address on one side—Three Bees on the other side.



[THIS CUT IS THE FULL SIZE OF THE KNIFE.]

Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the subscriber, and on the other side pictures of a Queen, Drone, and Worker, as shown here.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a last-time, with proper usage.

Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the "Novelty" is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the "Novelties," your POCKET-KNIFE will serve as an identifier; and in case of death, your relatives will at once be notified of the accident.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid for $1.25, or give it as a Premium to the one sending us THREE NEW SUBSCRIBERS to the Bee Journal (with $3.00.) We will club the Novelty Knife and the Bee Journal for one year, both for $1.90.

GEORGE W. YORK & CO. Chicago, Ill.

☞Please allow about two weeks for your knife order to be filled.

Wise Man's Wagon.

The man who has had experience in running a wagon knows that it is the wheels that determine the life of the wagon itself. Our ELECTRIC STEEL WHEELS have given a new lease of life to thousands of old wagons. They can be had in any desired height, and any width of tire up to 8 inches. With a set of these wheels you can in a few minutes have either a high or a low down wagon. The Electric Handy Wagon is made by skilled workmen, of best selected material—white hickory axles, steel wheels, steel hounds, etc. Guaranteed to carry 4000 lbs. Here is the wagon that will save money for you, as it lasts almost forever. Our catalog describing the uses of these wheels and wagons sent free. Write for it.
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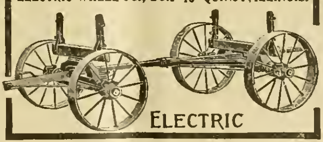
ELECTRIC

Rumley Company New Catalog.

From the city of LaPorte, Ind.,—"the Maple City"—comes fresh from the press the catalog of our regular advertising patron, The J. Rumely Company. In acknowledgement of the pride all its people have in this enterprising city, it bears on its front cover-page a beautiful wreath of Autumn-tinted maple-leaves; on the back page a cut in colors of the great Rumely manufactory with the leaf embellishment, and the book throughout is attractive in form and substance. It has a fit subject: its purpose is to illustrate and describe the well-known and popular Rumely Traction Engines and Separators. The objects of a catalog are well conceived and maintained to the end. No one can take up the book without being impressed with the fact that the Rumely Company intends that the purchaser shall know all about the Rumely goods. About one-half the book is taken up with full-page illustrations. Every point is made plain, so far as illustrations can do it and the descriptions are so minute and exact as to leave no questions or doubts in the minds of the reader when he has finished. The Company evidently proceeds upon the theory that if threshing machinery buyers appreciate just what their line consists of, it will be amply able to take care of itself against all competition. This must be conceded a wise policy where goods have the sterling character possessed by those of this concern. The book will be welcomed by all who are interested in high-grade threshing machinery. It will be mailed free to anyone writing for it. Please mention the American Bee Journal when asking for a copy.

Please mention Bee Journal when writing advertisers.

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Root's Goods at Root's Factory Prices.

Complete stock for 1903 now on hand. Freight rates from Cincinnati are the lowest. Prompt service is what I practice. Satisfaction guaranteed. Langstroth Portico Hives and Standard Honey-Jars at lowest prices.

You will save money buying from me. Catalog mailed free. Send for same.

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Contracts with dealers a specialty. Discount after July 1st

Send for circular.

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$5 FOR NOTHING. We have paid that sum several times for less information than is contained in our grand new book, "*How to Make Money with Poultry and Incubators.*" 8x11 inches, 196 pages. It has 12 special chapters by the best experts in the country covering the entire poultry subject. Over 300 illustrations and photographic views of the *Largest and Most Successful Poultry Plants* in this and other countries. Tells about the CYPHERS INCUBATORS. *It will be sent FREE POSTPAID for the next 30 days* to all who mention this paper in writing. Address nearest office.

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CYPHERS INCUBATOR COMPANY,
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That our line of Bee-Keepers' Supplies are some of the best goods in the world, and that our system of dealing with our trade is not excelled by anybody. Plenty of testimony from satisfied customers proves these things. Write and get our suggestions, our catalog and our discounts for winter-time orders—ALL FREE.

The Largest Stock of Bee Keepers' Supplies in Indiana. **C. M. SCOTT & CO.,**
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THERE IS ONLY ONE BANTAM INCUBATOR
IN PREMIUMS $4500.00 TO OUR PATRONS
AND 30 DAYS TRIAL
HATCHES EVERY GOOD EGG
BEST ON EARTH
SEND 2 CENTS FOR NO 63 CAT. AND PREMIUM LIST
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The leading Horticultural and Agricultural paper of the Pacific Coast. Published weekly, handsomely illustrated, $2.00 per annum. Sample copy free.

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25 years the best.
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$12.80 For 200 Egg INCUBATOR
Perfect in construction and action. Hatches every fertile egg. Write for catalog to-day.
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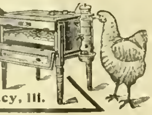

46A26t Please mention the Bee Journal.

HIGGINSVILLE BEE-SUPPLIES.

We have received a car-load of these unique suppplies this year and are nearly all sold. We expect to order another car soon. These goods are equal to if not the best on the market. Give us a trial order. We are also agents for the PROGRESSIVE BEE KEEPER, price 50 cents per year. Send your orders and subscriptions to us. We sell at factory prices.

TOPEKA SUPPLY HOUSE,
TOPEKA, KAN.

good as three or four colonies that others have. You might ask, How is that? Here is the reason: My queens are known as "The Prolifics." The honey-bees are of a large size, and they are great comb-builders and fast honey-gatherers. On my 200 acres of farm land we have any amount of basswood blossoms, goldenrod, and thousands of wild flowers and other nectar-giving flowers for the bees. We have also all kinds of trees, the leaves of many having honey on the upper side of the leaf. We have also rivers, creeks, and lakes of the purest and best running water, and no swamps or stagnant water, so you can see that we have here a veritable land flowing with milk and honey. It is foolish for one to expect honey from bees when there is no proper forage for them when the water is not good and the climate ditto. We have myriads of birds from the States in summer. The bees and birds seem to know a healthy climate.

Again, I have never met a man yet who knows how to feed his bees. Like man, and all else, the honey-gatherers need and want delicacies. I get different kinds of honey in the fall, and there is nothing in the medicinal pharmacopia that can come up to it. I never have thin honey. I have a beautiful orchard, with a southern aspect, and in the spring it is a perfect picture to see the bees covering the apple-blossoms, and the hum is like a locomotive wading through a snow-drift. Our Yankee cousins come to spend the summer at our lakes here in Muskoka, and they have said they never saw such splendid honey as they have eaten in our towns and villages. As to the keeping qualities of my honey, it is always as good the following June as when gathered the previous September; both in the comb and out of it. Who can beat this?

Ontario, Canada. JAMES BROWN.

Various Methods of Rearing Queens.

I have 40 colonies of bees, ranging from blacks to bright golden Italians. I have queens imported direct from Italy, queens reared by the Doolittle and by the forced method, also queens reared by the bees as nature called them at swarming-time, and by the supersedure plan, but I have had no experience like Dr. Gallup, with any of the methods.

By the way, Dr. Gallup, will you please tell us why that colony in the basswood log did not do as those colonies you had in your 36 and 48 frame hives—rear a queen to suit the capacity of the hive, and swarm the next season? I have had colonies in logs, with proof of their being there for a number of years, whose queens were reared by Nature's plans, and I have to see the first one that was in any way superior to the queens reared by the Alley or Doolittle methods, under proper conditions.

Now, Dr. Gallup, I'll tell you what I'll do: I will take 5 colonies, containing queens by the Alley or Doolittle method; you take 5 colonies containing queens by Nature, and set them beside mine, and if I don't get more honey from my 5 colonies than you will from yours, in this locality, I'll board you one year for nothing, while you prove to me how you did it.

The bees are all on the summer stands, and are in fair condition at this time.

There is much white clover, which has been well protected by the many snows, and prospects are good for a white clover honey-flow, if the weather is favorable at that time.

A. ZIEGLER.

Huntington Co., Ind., Feb. 9.

Fruit-Tree Spraying.

This was the subject of the monthly meeting of the Worcester County Bee-Keepers' Association, Feb. 14. The opening paper was read by H. P. Jacobs, who in brief said:

"There is no cause of friction between the bee-keeper and fruit-growers. It is fast coming to where trees must be sprayed, if the grower is to have salable fruit for the market. But fruit-growers and bee-keepers must realize this: As bee-keeper we are interested more in the time when not to spray, on account of the danger of killing bees. The Creator designed the bee for a special purpose,

They started even-now look at them

The Same Old Story

A modern machine always beats hand work

The Hardie Whitewashing Machine

works so much faster, forces the liquid into every crack and destroys germs and insects which the brush would pass over. The complete machine, express prepaid for only $5.00.
Sold under an absolute guarantee.
Full particulars on application.

The Hardie Spray Pump Mfg. Co.,
Dept. H Detroit, Michigan.

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SHEEP MONEY IS GOOD MONEY and easy to make if you work for us. We will start you in business and furnish the capital. Work light and easy. Send 10 cents for full line of samples and particulars.
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A COOL MILLION

of Snowy Wisconsin Sections, and 10,000 Bee-Hives, ready for prompt shipment. Send for catalog—it's free.
3A13t **R. H. SCHMIDT & CO., Scheboygan, Wis.**

TREE GROWN FROM SELECTED BEARING TREES
FREIGHT WE PAY IT **FREE** OUR BOOK HOW TO GROW FRUIT SEND FOR IT
TITUS NURSERY NEMAHA-NEB
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Wanted to Purchase

200 to 400 colonies of **BEES**—northern California, Oregon or Texas. State price, f.o.b. cars; also kind of hive, with and without supers; and condition of bees, about April 1st to 10th.

Address, DR. GEO. D. MITCHELL & Co.,
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GOOD SEEDS
SEND AT ONCE
25c for our great Garden Seed Collection. 10 big packages finest vegetables. 25 varieties for 50c.
25c for our beautiful Flower Seed Collection. 10 large packets beautiful flowers. 25 varieties for 60c.
Both 25c Colls. for 40c—both 50c Colls. for 75c.
Illustrated catalog and culture book free with each order.
MISSOURI VALLEY SEED CO.,
P.O. Box 557, "*The Good Seed Store.*" St. Joseph, Mo.

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SWEET CLOVER

And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5lb	10lb	25lb	50lb
Sweet Clover (white).....	$ .75	$1.40	$3.25	$6.00
Sweet Clover (yellow)....	.90	1.70	4.00	7.50
Alsike Clover	1.00	1.80	4.25	8.00
White Clover	1.50	2.80	6.50	12.50
Alfalfa Clover	1.00	1.80	4.25	8.00

Prices subject to market changes.

Single pound 5 cents more than the 5-pound rate, and 10 cents extra for postage and sack.

Add 25 cents to your order, for cartage, if wanted by freight, or 10 cents per pound if wanted by mail.

GEORGE W. YORK & CO.
144 & 146 Erie Street, · CHICAGO, ILL.

which is to aid nature in pollenizing flowers of different kinds. There are varieties of the same kind of fruit, and the honey-bee was made to carry the pollen from one tree to the other. Thus it was evident that the time to spray is not when flowers are in bloom. It is stated that soon as a flower is fertilized it ceases to secrete nectar and its petals fall. I should say that after the bud opened enough to admit any spray it is wiser not to spray, not only for the bee-keeper, but for the fruit-grower, since we must rely upon the bee to pollenize the fruit-blossoms, if we are to get a good crop of fruit. In summing up the matter I would say that trees are liable to be poisoned by spraying while in bloom, the liability increasing in proportion as the weather is favorable to bee-activity. Spraying should be done one week before blooming, two weeks after blooming, and again two weeks later."

It was shown by one speaker that New York State has a law which makes it a criminal offense to spray fruit-trees while in bloom.

Secretary A. A. Hixon, of the Horticultural Society, announces that Worcester fruit-trees are overrun with San Jose scale, and these must be wiped out or many fine orchards will be ruined. He showed twigs cut from pear, crab, peach and plum trees, infested with this pest.

It was further shown that very few in this vicinity do any spraying at all. Before the meeting adjourned the president appointed Mr. Hixon and the secretary a committe to draw up resolutions to send to our senator at Washington, urging the adoption of the Pure Food bill at this session. C. R. Russell.

Worcester Co., Mass.

CONVENTION NOTICE.

Michigan.—The Northern Michigan bee-keepers will hold a convention March 25 and 26, in Bellaire, Antrim Co., in the Town Hall. Special rates have been secured for entertainment at the Ellis Hotel, and also the Bellaire House, at $1.00 per day. Geo. H. Kirkpatrick.

PAGE

We Heartily

Recommend Page Fence for the worst breachy stock, and it does just as well for quiet stock.

PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.

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The Emerson Binder

This Emerson stiff-board Binder with cloth back for the American Bee Journal we mail for but 60 cents; or we will send it with the Bee Journal for one year—both for only $1.40. It is a fine thing to preserve the copies of the Journal as fast as they are received. If you have this "Emerson" no further binding is necessary.

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That covers the whole Apicultural Field more completely than any other published, send $1.20 to

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"Bee-Keeper's Guide."

Liberal Discounts to the Trade.

Helper Wanted

Young man with some experience to assist in large apiary in Chicago, close to church and city; everything modern. To help man with years of experience who is also a thorough mechanic. Give age, experience, wages wanted, reference, etc. Address, G. PURPLE.
Care American Bee Journal,
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Queen-Clipping Device Free!

The Monette Queen-Clipping Device is a fine thing for use in catching and clipping Queens' wings. It is used by many bee-keepers. Full printed directions sent with each one. We mail it for 25 cents; or will send it FREE as a premium for sending us One New subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device. Address,

GEORGE W. YORK & CO.,
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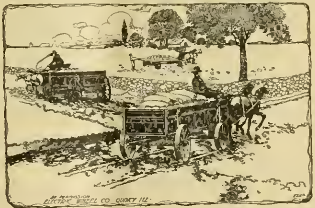
For Good Road-Making.

At the Auditorium, in the city of Chicago, on the evening February 20 the National Good Roads Convention assembled for its opening session. The National Highway Commission appointed by President Roosevelt and consisting among others of such distinguished members as Gen. Nelson A. Miles, Col. John Jacob Astor and Col. Albert A. Pope, were liberally represented. The Governors of most of the States in response to the invitation appointed delegates, and representatives were also present from every local good roads association of any consequence in the United States.

An assembly constituted as this one was should have been able to shape some policy to bring order out of a very chaotic but all-important subject. A most healthy sign was the presence of the strong hand of the General Government, heartily seconded by the different States. We cannot conceive of any field in which State or Nation can direct or encourage the spending of money which will bring to the great body of rural people such a direct and permanent good as the improvement of highways. Necessarily the convention concerned itself with general topics. No definite plan was formulated for the detailed work of road improvement. Yet something in this line would have been a step in the right direction and of all things the most practical. We instance the elementary principles of road-making, namely, drainage, raising centres of the roads, and rolling. Even outside of paving, these are prime essentials in municipalities They should be also first essentials in the country. The first two are correlative, the one being the necessary result of the other. As to the rolling and packing of the road-bed, if the purchase of heavy engines for the purpose, such as are used in cities and towns, be too radical a preliminary step, the convention would have adopted at least one good, practical measure if it had passed a resolution advocating the general use of broad-tired vehicles on the road. The same benefits are to be derived from it that flow from the the use of the steam roller. And in its use the cost would be nothing to the county or township authorities, the mere use of such wheels instead of wearing out the roads, do constantly improve them. Where the narrow wheels rut and furrow and lead to washing, the broad tires roll and make compact and permanent. It is only necessary to behold the road districts in regions where the broad-tired wheel is in general use to become at once an advocate of their general employment.


ELECTRIC WHEEL CO QUINCY ILL

Many towns with unpaved streets set a limit by ordinance to the width of tires which may be used, the tires being in all cases to have at least such a tread as will give the needed packing and rolling and avoid the cutting and rutting which necessarily creates far heavier draft and frequently makes the street absolutely impassable. The illustration herewith well illustrates our meaning. We reproduce it by courtesy of the Electric Wheel Company of Quincy, Ill., who by the manufacture of a wheel adapted to the purpose we are considering, is doing much to further the cause of good roads all over this country. It will be apparent that the draft must be much lighter for the broad-tired wheel than the narrow one even for the first tracking over a given point. All subsequent passing must continue to pack and improve the bed and still further lessen the draft, while exactly the reverse is true of the narrow tire. If the practical experience of every farmer did not unequivocally settle this fact, the experiments made by the Experiment Station at the University of Missouri would place the matter beyond cavil.

There are other essentials which will enter into road-building of the future. This is one—a very important one. All the more important because so fruitful of good results at no cost whatever to the authorities, and attended with no extra expense to the user of the broad-tired wagon, but on the other hand permits the hauling of larger loads with lighter draft and far greater convenience than in any other way.

Please mention Bee Journal when writing advertisers.

HONEY AND BEESWAX

MARKET QUOTATIONS.

Chicago, March 7.—The demand for comb honey has been and is of small volume, prices are weak, concessions being made where necessary to effect sales Fancy white comb held at 15@16c; all other grades of white are irregular at 13@14c; light amber, 10@12c dark and ambers, 9@10c. Extracted, clover and basswood, 7@8c; other white grades, 6@7c; amber, 5½@6½c. Beeswax steady at 30c.
R. A. Burnett & Co.

Albany, N. Y., Mar. 14. — Honey demand quiet; receipts and stock light. Comb selling, light, 15c; mixed, 14@15c; dark, 13@14c. Extracted, dark, at 7@7½c. Beeswax firm, 30@32c.
H. R. Wright.

Kansas City, Mar. 14.—The demand for both comb and extracted honey is better, receipts light. We quote as follows: Extra fancy white comb, per case, $3.40; strictly No. 1, $3.30; No. 1 amber, $3@$3.25; No. 2, white and amber, $2.50. Extracted, white, per pound, 7c; amber, 6@6½c. Beeswax, 30c. C. C. Clemons & Co.

Cincinnati, March 11—The demand for extracted honey is good at the following prices: Amber, barrels, 5½@6½c, according to quality; white clover, 8@9c. Fancy comb honey, 15½@16½c. Beeswax strong at 30c.
The Fred W. Muth Co.

New York, March 5.—There is a fair demand for white comb at 15c per pound for fancy, 13@14c for No. 1, and 12c for amber, with sufficient supply to meet the demand. Dark honey will be cleaned up with very little left; it is selling at about 11c per pound. Extracted rather weak and in quantity lots, prices generally shaded. We quote: White, 7@7½ cents; amber, 6½@7c; dark, 6c. Beeswax scarce at 30@31c for good average. Hildreth & Segelken.

Cincinnati, Mar. 7.—The comb honey market has weakened a little more; is freely offered at following prices: Fancy white, 14@15c; no demand for ambers whatever. The market for extracted has not been changed and prices are as follows: Amber in barrels, 5¼@5½c; in cans 6@6½c; white clover, 8@8½c. Beeswax, 28@30c.
C. H. W. Weber.

San Francisco, Mar. 14.—White comb honey, 11½@12½c; light amber, 10@11c; dark, 5@6½c. Extracted, white, 6@6½c; light amber, 5@5¼c; amber, 4@4½c. Beeswax, good to choice, light, 26@27½c; strictly fancy light, 29@30c.

WANTED WHITE CLOVER EXTRACTED HONEY!
Send sample and best price delivered here; also Fancy Comb wanted in no-drip cases.
THE FRED W. MUTH CO.
32Atf Front and Walnut, Cincinnati, Ohio.
Please mention Bee Journal when writing.

Honey For Sale.

2000 lbs. Basswood Extracted honey, at 9c a pound. All in 60-lb. cans. Warranted PURE HONEY. JOHN WAGNER, BUENA VISTA, ILL.
5Atf Please mention the Bee Journal.

For Sale Choice Alfalfa Honey (granulated) in 11½-lb. cans, at $8.00 per case of 8 cans, f.o.b. Cedar Rapids, Iowa.
11A2t H. L. WEEMS, Cedar Rapids, Iowa.
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DAIRYMEN ARE DELIGHTED
to meet those who work for us. Cow keepers always have money. We start you in business. You make large profits. Easy work. We furnish capital. Send 10 cents for full line of samples and particulars.
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EAST ST. LOUIS. ILL.
We carry a complete stock of HIGGINSVILLE BEE SUPPLIES at the above place. Our eastern customers will save considerable freight by ordering ftom them. Kind and courteous treatment, low prices and prompt attention our motto. Address, LEAHY MFG. CO.,
2415 Ernest Ave., Alta Sita, East St. Louis, Ill.
Catalog Free.

The Best Bee-Goods in the World....

are no better than those we make, and the chances are that they are not so good. If you buy of us **you will not be disappointed. We are undersold by no one.** Send for new catalog and price-list and free copy of THE AMERICAN BEE-KEEPER; in its thirteenth year; 50 cents a year; especially for beginners.

—THE—

W. T. Falconer Mfg. Co.,
JAMESTOWN, N. Y.

W. M. Gerrish, Epping, N.H., carries a full line of our goods at catalog prices. Order of him and save the freight.

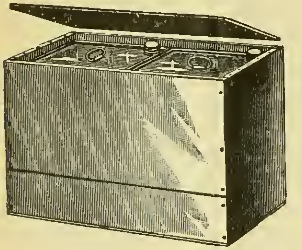
Please mention Bee Journal when writing.

Only 8c a lb.

FOR THE BEST

White Alfalfa Honey

ALL IN 60-LB. CANS



A sample by mail, 10c for package and postage. By freight, f.o.b. Chicago: 2 cans in box (120 lbs.) at 8 cents a pound. We can furnish Basswood Honey at ½c a pound more.

This Alfalfa Honey should go off like hot-cakes. Better order at once, and get a good supply for your customers.

GEORGE W. YORK & CO.,
144 & 146 E. Erie Street, - CHICAGO, ILL.

OMAHA, NEB.

We carry a complete stock of HIGGINSVILLE BEE-SUPPLIES at the above place. Our Neb. customers will save considerable freight by ordering from them. Kind and courteous treatment, low prices and prompt attention our motto. Address,

LEAHY MFG. CO.,
Catalog Free. 1730 S. 13th St., Omaha, Neb.

Please mention Bee Journal when writing

BEE-SUPPLIES!

ROOT'S GOODS AT ROOT'S PRICES.

Everything used by bee-keepers.
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DEPARTMENTS.

STRAY STRAWS.

By Dr. C. C. Miller, of Marengo, Ill. Dr. Miller is one of the best known writers in the U. S. In each issue of Gleanings he gives us a page or two of short notes commenting on articles found in the various American and foreign bee-journals. These are not only interesting but valuable. Very few bee-keepers have the time to read all the bee-journals, even if they could afford it, and you will get in Stray Straw notes relating to bee-culture from all over the world.

PICKINGS FROM OUR NEIGHBORS' FIELDS.

By Stenog. In each issue will be found immediately following the last-mentioned articles, another series of short notes picked up from the various bee-papers, with comments by Stenog. This department has been here now for nearly three years, and is full of interesting and witty matter. You have to read Stenog's writings to appreciate them. We can not do them justice in a brief description.

OUR HOMES AND HIGH-PRESSURE GARDENING.

By A. I. Root. Will be continued as heretofore, and in the editorial column Mr. E. R. Root will continue to give the latest developments in bee culture.

BEE-KEEPING IN CUBA.

Mr. A. I. Root has just returned from Cuba, and will give a series of articles on his sojourn there in his usual interesting manner.

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J. A. GREEN.

Foul Brood in Ontario.
WM. McEVOY.

AMERICAN BEE JOURNAL

43d Year. CHICAGO, ILL., MARCH 26, 1903. No. 13.

SOME OF THE DIRECTORS OF THE ONTARIO BEE-KEEPERS' ASSOCIATION.

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W. J. BROWN.

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THE AMERICAN BEE JOURNAL.

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GEORGE W. YORK.

DEPT. EDITORS,
DR. C. C. MILLER, E. E. HASTY, EMMA M. WILSON

IMPORTANT NOTICES.

The Subscription Price of this Journal is $1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

The Wrapper-Label Date of this paper indicates the end of the month to which your subscription is paid. For instance, "dec03" on your label shows that it is paid to the end of December, 1903.

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Advertising Rates will be given upon application.

Weekly Budget.

DR. C. C. MILLER, of McHenry Co., Ill. wrote us March 17:

"To-day the few colonies that are out of the cellar are having a fine flight—65°."

Evidently celebrating St. Patrick's Day!

◆

THOMAS G. NEWMAN was announced last week in these columns as having passed away March 10, in San Francisco, Calif. The Philosophical Journal (of which he was editor at the time of his death) contained the following in the issue of March 14:

> PASSING OF THOMAS G. NEWMAN.
>
> Mr. Thomas G. Newman passed to spirit life Tuesday, March 10, at 12:45 p.m.
>
> For several years Mr. Newman had been an invalid, and about three years ago he was stricken with nearly total blindness.
>
> From the latter affliction he was slowly recovering, and, in the last few months, was thanking the good angels for their ministering care in restoring to him his sight.
>
> About six weeks ago he was taken with the grippe, but persisted in attending to his work until Feb. 5. when, overcome by weakness, he fell on the pavement in front of the St. Nicholas Hotel.
>
> He was carried to his home, and all that the most solicitous care could do was done to insure his recovery.
>
> For a few days it was thought that restoration to health and usefulness was possible—even probable—and especially was this true after arrangements had been perfected which insured the permanency of the Journal, which had been his life work in recent years, and the perpetuity of which was his absorbing ambition.
>
> Early last week there came signs of a reaction, and day by day his friends saw the life-force slipping from him. Hope was compelled to give way to resignation to the decree of fate.
>
> His son, Mr. A. H. Newman, was telegraphed for from Iowa, and arrived in time to see his father before he passed to the unconscious state, which, for several hours, preceded his final transition.
>
> Mr. Newman was born in Bridgewater, Somersetshire, England, and was married to Eliza Powell (who has remained his staunch help-meet these nearly 50 years) Feb. 5, 1854. The same year Mr. and Mrs. Newman came to America on their wedding tour, and have remained in this country continually since, except during the years 1866 to 1869, when Mr. Newman was engaged in business as printer and publisher at Teignmouth, England.
>
> Mr. Newman has been engaged in many newspaper ventures, the most important having been the American Bee Journal, which he conducted from 1873 to 1892, and the Philosophical Journal, which he has conducted since, first in Chicago, then in San Diego for a brief time, and since 1897 in San Francisco.
>
> Mr. Newman was one of those true-hearted men whom all men knew to love, and who thought vastly more of the welfare of others than of himself.
>
> Besides his wife, there survive him his only son, Mr. A. H. Newman, Mrs. F. H. Chenoweth, and Mrs. H. P. Cook, the first two of whom were at their father's bedside at his passing out. The other daughter was in the East, and could not get here in time to see him in this life.

Mr. A. H. Newman, in a letter dated at San Francisco, March 16, said concerning his father's picture used on the first page of last week's issue, that it is "the latest and best in existence." To which he added this in reference to what we have reprinted above from the Philosophical Journal:

> In relation to further information I will say that the latest number of the Philosophical Journal, which has undoubtedly reached you before this time, contains a little synopsis of my father's life, and I don't know of anything that I could add excepting that the funeral took place on Sunday, March 15, at 2 p.m., from the Lodge Room of the Pacific Lodge of F. & A. M., and at the request of Golden Rule Lodge No. 726, of Chicago, of which he was a life member; and it was his request that he be buried with Masonic honors.
>
> Yours truly,
> A. H. NEWMAN.

◆

THE KING-BEE OF NORTHERN COLORADO, says the Rocky Mountain Bee Journal, is M. A. Gill. He will enter the honey harvest of 1903 with 1250 colonies, says the same journal. That's banking a good deal on successful wintering on the part of Mr. Gill, seeing the statement was made in the January number. But the success of the past may fully warrant such banking.

◆

READ ALL THE BEE-PAPERS.—In the March Bee-Keepers' Review is a characteristic editorial by Mr. Hutchinson, with this heading: "A Man Can't Know Too Much About His Business." From it we take these paragraphs:

> If a man is making a specialty of bee-keeping, I believe it is a mistake not to take all of the journals and read all of the books on the subject. He can't afford not to read them. Ever since I began bee-keeping I have read all of the journals, and have found it profitable to do so. Many a time one little item has contained information that was worth dollars and dollars to me. In my travels about the country I find that the most successful bee-keepers read all, or nearly all, of the journals. Men who have been in the business the longest, who have kept the most bees, those who have had the most experience, and who, it would seem, stood in the least need of advice or help from journals, are the ones who are the most anxious to read them. They have learned their value.
>
> Let no one imagine, however, that the reading of all of the journals will make of him a successful bee-keeper. Neither will the keeping of a large number of colonies alone lead to the same result. Successful bee-keeping does not depend upon any one thing; it is a well-rounded whole of many parts. But don't forget that any lack in one or more of the component parts makes a bad showing in the final summing up.

We believe we have seen all the bee-papers that have been published in this country during the past 20 years, and, with perhaps one or two exceptions, every one of them has been worth many times its subscription price to those interested in bee-keeping.

We can not understand how any one who expects to make a success with bees can hope to do so without taking several of the best bee-papers published to-day. For about $5.00 we suppose that all of them could be taken—less than 10 cents a week! It's a poor business indeed that could not stand that. At any rate, every bee-keeper should have at least *one* good bee-paper. If this journal doesn't "fill the bill," then try another. That is the way we should do, if we couldn't afford to take all of them.

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ESTABLISHT IN 1861
AMERICAN
BEE JOURNAL
THE OLDEST BEE-PAPER IN AMERICA

43d YEAR. CHICAGO, ILL., MARCH 26, 1903. No. 13.

Editorial.

Clipping Queens is greatly favored by some and as severely condemned by others, but, as a rule, those who favor clipping have tried queens clipped and unclipped, while those who condemn it have never thoroughly tried clipping. If you have never tried clipping, it might be a good plan for you to clip a small proportion of your queens, and then you could judge better as to which plan is best for you.

◆

Laying Workers.—One continues to see mention in bee-papers of a colony having "a laying worker," with perhaps a remark as to what became of "the laying worker." It should be remembered that careful analyses have shown that in a laying-worker colony a large proportion of the bees are found to contain eggs. The shaking off the bees at some distance from the hive, so that "the laying worker" may not find her way back home, will thus be seen to have some imagination connected with it. A laying worker will probably find its way back to its home as readily as any other worker.

◆

Placing Hives in Pairs is strongly advocated by those who have practiced the plan. It is claimed that the bees will never make the mistake of entering the wrong hive of a pair; if a mistake is made it will be by entering the corresponding hive of another pair. This gives the advantage of economy of space. A further economy is gained by putting two rows together close, back to back, thus making the hives in clusters of four. If you level your hives with a spirit-level—and by all means you should—you will find it much easier to level a stand for two hives than a shorter one for one hive, taking less than one-fourth the time.

◆

Introducing Virgin Queens.—The Australian Bee-Bulletin, page 200, says: "Bees are said always to accept a virgin queen." That is one of those half-truths that are often the most dangerous errors. The truth is that, in general, virgin queens are not nearly so easy to introduce as laying queens. The bees seem to want some one to engage immediately in the work of laying eggs, and a virgin queen does not fill the bill. There is, however, a short time in the life of every virgin queen when she seems to be readily accepted by any colony, even one which has a normal queen with which the bees are entirely satisfied. That time is during the babyhood of the queen, and does not last many hours after she emerges from the cell. At that time she does not seem to be recognized as a queen—she is merely a baby, and will do neither good nor harm.

As soon, however, as she becomes old enough to put on the airs of a queen she must take her chances as such. If the colony is in need of a queen, her chances of acceptance are much better than if she had been left out of the hive till more mature. She is already there, in peaceable possession, and possession is nine points of the law. If there is present a laying queen that the bees are thinking of superseding, the young Miss has the same chance as if she had emerged from a cell matured in the hive. But if there is present a laying queen with which the bees are entirely satisfied, then as soon as she is old enough to be recognized as having royal blood in her veins, she is promptly seized as a usurper.

Just remember that until a virgin queen is a few hours old she will be kindly received in any colony. Whether she continues to receive kind treatment after she begins to assert her royalty depends upon circumstances.

◆

Have You a Spirit Level?—If not, get one and use it in leveling your hive-stands before they get any heavier. If your bees are in the cellar, level the stands before the bees are brought out. Don't think you can level well enough by the eye, especially if the ground is not level. Just level two or three stands by the eye, and then test them by a level, and you will very likely be done with the eye-business. No matter about leveling from front to rear—perhaps it will be all the better if the hive tips a little forward—but from side to side they should be level.

◆

Absorbent Covering for Hives.—Straw mats, coverings of chaff, etc., have been used to put over brood-frames in winter, and are much in favor. The name "absorbent," however, conflicts with the popular theory as to such coverings, which is that the atmosphere of the hive slowly passes up through the pores of the mat or other covering. If the air passes through it can hardly be said to be absorbed. The real value of such coverings probably consists in their being non-conductors, retaining the heat. The following Stray Straw from Gleanings in Bee Culture is in point:

> R. Rhomberg, in an able article in Bienen-Vater, reports investigations as to ventilation. He put a straw mat over a hive, filled the hive with smoke, then watched the smoke escaping upward. It came through the needle-holes, the wrinkles in the binding, and especially along the crack where the cushion lay on the hive, but never a bit came through the straw. That the straw is impermeable is further shown by the fact that it becomes damp. If air passed through it, then the moisture would pass through and settle on the outer surface, leaving the mat dry. If he is right, and I suspect he is, then we are a bit off in thinking that cushions are good because the air passes through them. They are good because they are non-conductors, keeping warm. The air must be allowed to escape through little holes or cracks, and the under surface may be water-tight, only so it is warm.—[There is something in this, I believe. Absorbents will take up water; but if they would allow air to pass through them, that water would be evaporated, but it is not. The common practice now is to put a sealed cover over the brood-frames in winter, and then the so-called absorbents on top, not to "absorb," but to provide a non-conductor of heat.—EDITOR.]

◆

Use of Drones.—Among the old writers will be found those who credited the drones with laying all the eggs. Later they were counted water-carriers. Modern authorities generally consider their sole function that of fecundating the young queens, yet of late there seems a tendency to attribute to them other functions.

Some maintain, in a general way, that a colony will do better if allowed to rear a reasonable amount of drones, the fact that the bees are eager to rear drones being sufficient proof that it is the right thing to do. But it is not always a safe thing to appeal to Nature. That would lead the poultry-raiser to have as many cocks as hens in his flock.

There seems, however, more force in the argument that drones aid in keeping up the heat of the colony, and this argument obtains more especially among some of the German and French bee-keepers. One German writer gives what he considers a striking instance. A very strong colony, from which might have been expected a heavy harvest, had all its drones destroyed, and the harvest was almost nothing, because a large proportion of the field-bees had to stay at home and keep up the heat, which heat would have been provided by the drones.

Admit that the destruction of the drones resulted as claimed, does it follow that it is a good thing to have in each colony a force of drones, independently of their use as mates for the young queens? Suppose that the drone-comb in which the drones were reared had been worker-comb instead. Would not the workers reared therein have served equally well as heat-producers? Will not a pound of workers produce just as much heat as a pound of drones? Will they not produce more? It is not the bee that is sitting perfectly still, but the bee that is moving about in lively action that produces heat. The nurse-bees are in lively action, the drones are not. The drone takes its exercise out in the open air, wasting its heat in warming the weather rather than in warming the hive. The truth would seem to be that the workers produce more heat than the drones, and produce it at no cost, while they are at work as nurses, awaiting the time when they will add to the stores of the hive as fielders.

Convention Proceedings.

Chicago-Northwestern Convention.

Report of the Chicago-Northwestern Bee-Keepers' Convention, held in Chicago, Dec. 3 and 4, 1902.

BY OUR OWN SHORTHAND REPORTER.

(Continued from page 182.)

IS SPRAYING IN BLOOM A CRIME?

"Is spraying fruit-trees in full bloom a crime against bee-keepers?"

Mr. France—I think in four States of the United States there are laws on that subject, making it a criminal offense to spray fruit-trees with poisons.

Pres. York—It is not a crime in Illinois, but it is not a good thing to follow to spray fruit-trees while in blossom.

Mr. Moore—I would ask the president to ask some one here who knows about that to explain it in detail. This is very interesting, and I am sure some of them have not got it in their minds why fruit-trees, or, rather, why blossoms should not be sprayed with poisonous mixtures.

Pres. York—Mr. Abbott, why should fruit-trees not be sprayed while in blossom?

Mr. Abbott—Because it is dangerous to the life of the fruit itself. Any kind of mixture is detrimental to the development of the germ, and if we could make the most farmers understand that—if they could see that they are killing the best fruit they have when they try to kill something that doesn't exist. There will nothing hinder it except the canker-worm, and a man who is wide-awake and looks after them can have them all exterminated before fruit is in blossom, and then wait a few days and go after them again as soon as the time is past and the bloom has fallen, and get rid of them in that way. That is the only thing that I know of that we have in Missouri that can be reached. They are simply wasting their time trying to reach the coddling-moth. The reason you can't kill them is, they have a way of hanging at the end of the blossom of the apple; they do not immediately enter the apple but eat around, and while the apple is yet upright if a little poison lodges in there and the blossom closes up the larva goes in there and eats it and kills him. If you get some poison in there, and they will stay, you can do something; but over 10 percent go some place else.

Mr. Fluegge—I would like to say that the farmers around our way got into the habit of not using a spray or mixture, but they throw the poison with a powder-gun, blow it up into the blossom. That would poison just as the spray.

Pres. York—Would the powder injure the blossom as much as the moist spray?

Mr. Kluck—The powder will only hang to the tree or to the blossom if it is a little moist. If it is dry it will scarcely make any effect, and it will not do any harm; and if it is damp, why the bees will get the poison just the same as if sprayed.

Mr. Fluegge—The farmers out our way get up quite early while the dew is on the fruit-trees.

Dr. Miller—The important part to have made public in that matter is, that the poison coming upon the delicate end of the pistil injures them. We are not so anxious that the people shall know that it hurts the bees, but we are anxious that they shall know that it hurts the fruit, and to throw the poison there, either dry or moist, or take it at a time when it is moist from the dew, there is moisture enough in that pistil so that when the dry powder is thrown upon it it will hurt the fruit.

Mr. Abbott—Another important thing is to have the farmer understand that he is not only running the risk of the possibility of injuring the fruit, but he is wasting his powder. He is shooting at the squirrel, not the squirrel that has run in the hole, but the squirrel that hasn't even gone into the hole, or hasn't even been there. The farmers are shooting at an animal before it is born.

Mr. Johansen—Whether it is powder spray or a liquid it is on the same principle, the powder is sprayed when the dew is on, and would form a liquid, and the poison to the bees would be just the same as if the liquid were sprayed on it. It has been decided by different experiments that it is injurious to the fruit, that it will kill a large percent of the blossoms. I always read every spraying article, and I have never found one who advised spraying while in blossom except Wm. Stahl. All the information we can get from an experiment station is that it is detrimental to the fruit, and greatly so.

Mr. Armstrong—We have said that the spraying is criminal. Is it criminal because we are destroying the bees? We are speaking in behalf of the bees now.

Dr. Miller—It is not criminal in this State. I think Mr. France mentioned that there were four States in which it is criminal. It is criminal there simply because it is against the law. The law is, that they shall not spray while the fruit is in blossom.

BEES USING MOIST POLLEN IN SPRING.

"Will combs of moist pollen left out in empty hives be used by bees in the spring?"

Dr. Miller—Yes, to a certain extent, if the bees are scarce of pollen, and there is no pollen yielding in the flowers. When there is plenty of pollen in the flowers they prefer to take that.

Mr. Fluegge—Will not the weather bake it hard so that the bees can not use it?

Dr. Miller—As a rule, if you leave it there long enough it will become dry and hard. I was answering on the supposition that it was in good condition.

Mr. Fluegge—To save such combs what should be done to keep them in good condition to use the next spring?

Dr. Miller—They keep during the winter, and in the spring put them in the care of the bees.

Mr. Whitney—Suppose that those cells of pollen become molded by being out in hives during such weather as we had the past season? What would you do with them?

Dr. Miller—Then I think it would spoil.

Mr. Whitney—You would count that the whole of the pollen in the cells was injured?

Dr. Miller—I don't know, the under part might be good, but I wouldn't count on it any. I wouldn't use it.

Mr. Whitney—I had something of that kind for the first time this fall; I left it out a few days longer than I should. It was outside in damp weather and the pollen molded.

Dr. Miller—I wouldn't like to use it.

Mr. Wilcox—I have many times had combs stored in an outside cellar in which they frequently become molded, and I placed them in the hives in the spring and the bees carried it out.

Dr. Miller—I was thinking of putting it in the hives for the winter. In the spring I wouldn't hesitate giving the bees anything.

Mr. Whitney—Those frames of molded pollen are outside, and will be kept out.

REMOVING POLLEN FROM COMBS.

"How can pollen be removed from combs when not needed?"

Dr. Miller—I should say it isn't needed when it is all dried and spoiled, and then I should try to get out by soaking it.

Mr. Pettit—I asked that question myself. In my locality we have more pollen than we know what to do with. I have been in the habit of melting up good combs because I did not know how profitably to get the pollen out of them.

Mr. Gerbracht—If one cares to go to the trouble of taking the pollen it can be soaked for half a day or so, and then can readily be washed out with an ordinary spray.

Mr. France—I had a sample sent by an Illinois bee-keeper in this vicinity lately. He had what he called a surplus of pollen in the combs, and wishing to keep these combs for extracting-combs he soaked them and then hung them out for that mixture to penetrate—then tried to throw the pollen out with the extractor, if possible. In part he succeeded. In a little while, upon examining these, he found there were millions of little life in these combs. He feared that something had gotten in them, and it wasn't foul brood, and he wanted me to examine them; and under the microscope I found they were little live maggots, and it was then in the maggot eggs. I asked him if it was in the comb where there were bees? They don't destroy comb very much, but are working largely to destroy comb.

WILD HONEY-BEES.

"Are there any wild honey-bees in the United States?"

Dr. Miller—Lots of them.

Mr. Wilcox—I am curious to know what the gentleman means by wild honey-bees. I came to Wisconsin as much as 50 years ago, and went off into the woods many miles from any settlement, and found the woods full of bees. Were they wild, or were they tame?

Dr. Miller—If you find a colony of bees in a tree that somebody doesn't own, those are wild bees. Take them and put them in a house, and they are tame bees; then they swarm the next year and go back in the same tree, and they are wild bees.

Mr. Moore—If the one who asked this question wants a straight up-and-down, flat-footed answer without shirking, I will say all the bees are wild bees, so recognized in the law. If not, how does it come they swarm to the woods? They don't know you as the cow or horse. It is perfectly plain that all bees, anywhere and everywhere, are wild bees. They don't even have a love for home.

Dr. Miller—That's all right; Mr. Moore is a lawyer. I am a bee-keeper. I am right, too.

Mr. France—On the point of law, why is it then that they tax bees in the State of Iowa?

Dr. Miller—Don't they in Wisconsin? They do in Illinois.

(Continued next week.)

Contributed Articles.

Age of Bees—Longevity and Energy.

BY J. A. GREEN.

THAT bees under ordinary circumstances live but a short time is well known to all who have taken the trouble to experiment during working season. The changing of the queen, as in giving an Italian queen to a colony of black bees, gives an opportunity for the careful observer to demonstrate this fact beyond doubt. As this test is made only during the working season, and as we know that bees live a much longer time during the winter months, we assume, and no doubt with correctness, that nearly all bees work themselves to death, their days being greatly shortened by the fatigues and accidents of their busy lives. It has been noted that queenless bees usually do but little work and consequently live longer. I once had a striking illustration of this fact.

One spring I found a small colony of bees queenless early in the spring. A queen for them was not to be had except at a high price, and it was too early for them to rear a queen with any likelihood of developing into a good colony. I had learned long before this that it was unprofitable to unite such a colony with another at that season. So I simply let them alone. For some reason they did not waste their energies in developing laying workers, their combs, whenever I looked at them, being entirely free from brood or eggs. I opened the hive several times during the season and often noticed the bees guarding the entrance and occasionally flying in or out. The last time these were noticed was on Sept. 5. Several days after, not seeing any bees at the entrance, I opened the hive and found them all gone. But they had lived through nearly the whole of the working season in addition to the winter. I think those bees were hatched not later than October 15, or perhaps Nov. 1, though there is a chance that they came from brood started much later than usual. The probability, though, is that brood-rearing stopped at the usual time in the fall, which would make them at least ten months old.

I wish that I might have had some queens from the mother of those bees, in order that I might have determined whether their exceptional longevity was accidental, or a family trait that might have been transmitted. It is doubtful if a more valuable trait could be secured, unless it be that of a greatly increased working energy, than the vigor and strength of constitution that would enable bees to withstand for even a few days longer the hardships of the working season. As the part of the bee's life that is spent in honey-gathering is so very short, it is evident that every day added to the average life of the working force would mean a very substantial increase in the amount of the honey gathered by the colony. It is a matter of common observation that there will be a great difference in the amount of honey stored by two colonies that to all appearances are exactly alike at the beginning of the honey-flow. We generally ascribe this difference to the greater working energy possessed by one. Very likely in many cases at least, this is the true solution, but I think that many times the superiority of the winning colony lies only in the ability of each of its bees to put in a few more days' work than their competitors.

Again, most of us have noticed that there is a remarkable difference in the way colonies breed up in the spring. Of two colonies apparently alike on April 1, one may be twice the size of the other three months later. We usually lay this to the greater prolificness of the queen in the larger colony. This may often be true, but I think that in most cases the bees of the larger colony have lived to a greater age. This would keep a larger force of bees in the hive all the while, even if no more eggs were laid, but, further than this, it is the presence of this greater number of bees that permits more eggs to be laid and reared into brood.

There is nothing unreasonable in the supposition that the bees of one queen live longer than those of another. We are all familiar with the fact that some families in the human race are much longer-lived than others, and that this quality is transmitted from generation to generation. There is a field here for the scientific queen-breeder that it seems to me has been all but untouched. Of course, those who have selected their breeding stock according to the amount of honey gathered, and the way they have bred up in the spring, have included this factor, perhaps without knowing it, but, if so, it has been largely a groping in the dark that could not yield the results that a more definite knowledge of the ends to be aimed at might have secured. If any breeder has paid special attention to this point, I have never heard of it.

Whether or not there be anything in Dr. Gallup's theory in regard to the "missing link," and however much of exaggeration there may be in his wholesale condemnation of modern methods (or perhaps I might say *all* methods) of queen-rearing, he deserves credit for calling attention to the value of long life in workers as well as in queens. It is a subject for the deepest thought and the most careful experimentation.

Mesa Co., Colo.

Foul Brood in the Province of Ontario.

BY INSPECTOR WM. M'EVOY.

FOUL BROOD will soon be a thing of the past in Ontario. The Province of Ontario had at one time more foul-broody apiaries than any other Province or State in the world, and now has less diseased ones than any country, barring none. Ontario has to-day more sound and very choice apiaries for the number kept than any other country in the world, and what has brought about such great results as these is a thing that I will here explain.

In 1890 Mr. Gemmill (one of the best all-round bee-keepers that any country ever produced) saw very plainly that the whole bee-industry of our Province was going to be wiped out by the very rapid way that foul brood was then being spread all over the country, with no law to check it or prohibit the sales of the many diseased colonies that were being shipped into very many localities. Mr. Gemmill knowing all this to be a fact, took hold and spared neither time nor expense until he got the foul brood Act passed, which has proved to be the best thing ever done for the bee-industry of Ontario.

Just as soon as the Act was passed I was appointed inspector for the Province by the directors of the Ontario Bee-Keepers' Association, on account of it being widely known that I had been curing diseased apiaries for years before that, and had been a success at the business, and for this reason was considered a suitable man for the position.

I knew that I had a big job before me at that time, and wanted a few thousand pamphlets published with my method of treatment in to be sent to every bee-keeper in the Province. This was complied with, and 10,000 of these little books were ordered to be printed at once. A little later I wrote asking to have 500 printed in German. This was also granted, and in a short time after that the 10,000 foul brood pamphlets were sent direct from the Minister of Agriculture to the bee-keepers. These were a great help to me in getting the many diseased apiaries cured.

The directors of the Ontario Bee-Keepers' Association took hold at that time and helped me all they could, and sent me lists of the apiaries that they wanted inspected, and urged the bee-keepers everywhere to go strictly by my treatment, which helped me immensely to get the disease wiped out.

The first season that I went out on my rounds through the Province, I found the disease in every village, town and city that I went into, and also in every country place where bees were kept, and now I am very much pleased to say that I have succeeded in getting the disease almost driven out of our Province, and now have it under perfect control, and can very easily attend to the few apiaries that are suspected to have a little of the disease in them. I have a few apiaries in the county of Norfolk that are suspected to have the disease, and a few in the county of Simcoe, and a little work to do in western Ontario, and some down east; this is all that I know of, and I know more about the true condition of the apiaries of Ontario than any man in it.

N. E. France is, and has been, the only inspector for Wisconsin. W. Z. Hutchinson is the only inspector appointed for Michigan. But here in Ontario we have two inspectors to do the work (myself and Mr. Gemmill), and I have sent him out but twice in the last ten years.

Mr. Gemmill and I are not enough to satisfy some three or four men, and these men want local inspectors appointed all over the Province. We have 43 counties in Ontario, and counting that we have eight townships in each county, that would make 344 townships. Now, suppose that we appoint an inspector for each township, and that each of these 344 men was to send in his bill at the end of the season for $30, that would only amount to $10,320. Where would this little sum come from? Would these men make no mistakes? They certainly would, and very many of them, and when they would find foul brood, black brood, starved brood, chilled brood, and brood that had been poisoned through some foolish man spraying fruit-trees while in full bloom, they would report many cases to be foul brood when it was not. I have received more or less reports of this kind every year since I have been inspector, and some from bee-keepers that I did think would know it, and when I got to their place was very much surprised to find that they were mistaken, and that it was a dead brood of another kind, and not foul brood at all.

Any bee-keeper that has foul brood should apply to me to help him, and he can depend upon it that I will never report to any person but the Minister of Agriculture what I found in his apiary. No bee-keeper should be foolish enough to allow any person to examine his colonies that would report that his apiary had foul brood, if he found it there, because it hurts the sales in all such cases long after the diseased apiaries have been cured. Cure your diseased colonies if you can, and, if you can not, apply to me, and if you have good reason to believe that the disease is in other apiaries in your locality, send me a list of the apiaries you want inspected, and I will see that they are cured; but do not ask me to tell if I find the disease in any of them, because it would cause trouble and do others no good. I have to see that the diseased apiaries are cured, and that is sufficient.

Woodburn, Ontario, Canada.

Queen-Rearing—Replies to Critics.

BY HENRY ALLEY.

I HAVE seen much in this journal during the past winter that was of more or less interest to the general reader. I have also seen much that could only interest the persons who wrote the articles.

Now I admire having anything I send the papers for publication criticised in a fair, manly way. In fact, I court criticisms at all times. But when criticisms run to mere personalities, I surely shall call a halt, so far as paying any attention to them. Competent critics can do any opponent honor; but he who has had no experience in the matter under discussion, and his argument is very personal, or says "I think so," "I don't believe it," etc., these are the people who should not appear in public print as critics. Such people think they count, and have done a smart thing, but the readers who possess a fair amount of horse-sense take no stock in their cheap talk. For instance, a man away out in Oregon made some remarks, on page 130. This man said: "I can pick out conclusive evidence enough to condemn his entire method of rearing queens." I want to say to that man that the methods I use in queen-rearing were tested, found good, and pronounced so by the foremost bee-keepers of the world long before that man's head was as large as a cranberry. The idea of any man criticising another when what he says plainly shows that he has had no experience at all in the matter he so violently condemns!

"Beware of the $100 queen-man!" Why, I am unfortunate enough just now to have a queen-bee I would not sell for $100. Isn't that really a misfortune? Just my luck! What! a queen-bee not worth $100? Let me tell a little experience in this connection. Now, I am not certain about the year, but I think it was the season of 1878. All the bees in eastern New England perished during the winter, not on account of a hard winter, but from some unknown cause. The next spring I was not the owner of a colony of bees, not one, not even a 50-cent queen. Well, I had to go among my friends hunting up bees, and if possible a *breeding* queen. Had I not found one I surely would have gone out of the bee-business that year. I found one man in a town 6 miles away who had lost all his bees but one colony in which I had put a fine Italian queen the summer before. There was about a handful of bees and as fine a queen as I ever owned. She was a *$100 queen*, dead sure. See if she was not worth that, when you have finished reading this story. That queen and the few bees were my entire stock in trade until I went for miles around the country and found 25 colonies of bees. I bought all the bees I needed after a while, though only a colony here and there, and many of the colonies were very weak. A good honey season and favorable queen-rearing weather prevailed through the season. Now, here's how I came out in the fall: I reared and sold more queens that year, and at a greater profit, than in any other year I have been in the queen-rearing business. My whole success was in the one queen and handful of bees. Now, Mr. Whitcomb, you set a price on that queen.

Mr. Whitcomb starts his article, on page 130, by saying: "I see Mr. Alley disdains to refer to my $25 proposition, etc." I am in total ignorance as to what Mr. Whitcomb refers. I have seen no proposition from anyone, directed to me in any publication. There, Mr. Whitcomb, I am done with you. You may shoot away as much as you please. I can spend my time to much better advantage than reply to such articles as you or any other unheard-of bee-keeper can call my attention to.

I also see in the same copy of the American Bee Journal that my old friend, Dr. Gallup, has not forgotten me. I only want to say to the Doctor that he need not accuse me of doing free advertising for myself. It is all unnecessary for me to do that. I have been in the queen-rearing business 40 years, and never in any year could I rear enough queens to fill all the orders that came to me. Last fall I returned $100 sent me for queens that I could not supply. All this business came through the American Bee Journal, as I did not advertise in any other paper last year. Doesn't this speak well for York and Alley?

Some people are always happy in lauding their own virtues and belittling those of other people.

Now I'll come down to something that will please the readers of the "Old Reliable."

It has been said in this paper that no queen-breeder sends out good queens. Of course, that is very sweeping, as it takes in all but the person who makes the charge. He's all right. I remarked in one of my previous articles that the rearing of black queens and yellow-banded queens were quite different things to do. 'Tis the easiest thing in the world to rear black queen-bees. It requires no experience nor science. Anybody can do it whoever saw bees. Doesn't the reader remember when the only fowls in existence were the old dung-hills? Everybody had good success in raising chicks and in setting eggs by the millions. An old hen would "steal" her nest and bring a chick out of every egg that happened to be under her when she commenced to sit on them. Just so with rearing old-fashioned bees and queens. How much success do the people have nowadays with the new-fangled breeds as compared with the dung-hill variety?

I'll ask all the queen-breeders in the land if they do not have a good deal more trouble to rear what are called "pure" Italians than they do in rearing hybrid queens? It is so. No one will deny it. Yet we are condemned because all our queens do not prove to be as good as those hybrid queens reared by some people. We all can rear just as good hybrids, and by much less fussy methods. Bee-keepers do not want to buy hybrid queens; they won't have them. Nor do people care any more to buy the old dung-hill breed of fowls.

Some of the queens we send out do not prove to be as good as they are expected to be. But these same queens were promising when they were shipped. The fault is not in the breeding. By this I mean that the breeder used all his endeavors to produce good queens, and the queens appeared to be all right when they were sent out. Don't say the breeder was careless, or that he don't know how it is done—credit the trouble to the great difficulty in breeding queens of the yellow-banded strain.

For the benefit of the readers I present a cut (Fig. 1) showing a batch of queen-cells built by a method with which few bee-keepers are acquainted. Now the four rows of cells, as illustrated, show all the correct indications of first-class work done by bees. You will see that every cell is large, long and heavily waxed. This latter feature is the strongest indication that the occupant of each cell is as good as can be reared.

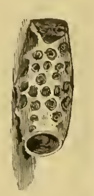

Fig. 3.

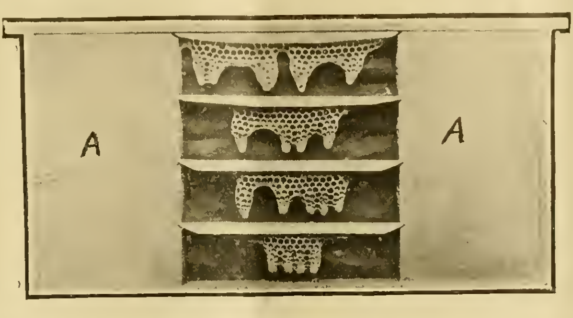

Fig. 1.

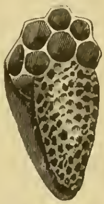

Fig. 2.

This batch of queen-cells was the last built in my apiary in the season of 1902. Had they been started earlier in the season twice as many cell-cups would have been started.

Two powerful colonies of bees were used to complete the cells, as the bees that start the cell-cups are not allowed by the system to do so. The bees that start the cups work only 24 hours on them. Then about a dozen of the cups are given to the most powerful colonies in the yard to finish up. Who on earth knows of a better system of rearing queens? Speak right up and let us all know. I have experimented in this line nearly half a century, but I know of nothing so good, nor do I know of any method that will come up to it. *I can rear better queens this way than 'tis possible to rear under natural swarming.*

One writer says, "No good queens are reared except in cases where the queen drops an egg in a cell-cup." I know better, for years of experience, that but very few queens are reared from cell-cups. Surely they are not in the natural way. Now and then a cell-cup can be found at about swarming-time that has an egg in it. But there is no evidence in any case that the cell-cup was first formed and the egg put in it by the queen. I have seen an egg in some very shallow worker-cells. At swarming time, when the bees come across such eggs they start up a cell-cup at that point. I have seen queen-cells built out on the face of solid brood, in the center of a comb. When there happened to be a cell with only an egg in it when the bees were seized with the swarming fever, and that egg was used from which to rear a queen, there was not the slightest chance for a cell-cup in that spot.

Why don't people give actual facts, and not say, "I think?" I *think* does not go in a court of law. Why should it count elsewhere any more?

In Fig. 2 I also show a single queen-cell. It will be seen that this cell is also very heavily waxed, large at the base, etc.

The third cell (Fig. 3) illustrates a very poor cell, that is, a cell from which a very poor queen will emerge. It is mean, short, and in no way indicates that the unborn queen is of any value. Now when the queen emerges from the cell she most likely will give positive evidence of the "missing link."

I have noticed that "missing link" in some cases, but only on some queens that are half-nurtured, and most likely were reared from a larva three or more days old. I never saw anything about good, healthy young queens that would indicate the existence of an umbilical cord. Only the unborn offspring of warm-blooded animals are connected by an umbilic appendage—through this attachment the young are nourished. Why is an umbilical cord necessary in any animal that is supplied with food sufficient to bring it into existence while it is maturing? When born it is able to feed itself almost the moment it breathes?

The umbilical-cord advocates may be correct in their theory, but to me the whole thing seems very improbable and unreasonable.

To-day, March 2, 1903, I received a letter from a bee-keeper away down in Argentine Republic, in which he says: "I am a great admirer of your system of rearing queens, which I learned through the American Bee Journal."

The above shows how a man who keeps 300 colonies of bees appreciates a good thing. Essex Co., Mass.

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

Emptying Unfinished Sections.

On page 130, Mr. Baldwin tells how he succeeds in getting the bees to empty sections. We tried practically the same thing without entire success. There was one difference, however: We tried it in the fall, he in the spring. We want our sections all emptied in the fall, as we use them for bait-sections, and would consider them spoiled for that purpose if the honey was allowed to candy in them, as it will be sure to do if left till spring.

Women Carpenters to the Front.

Ever since reading the experience of Kate V. Austin (page 42), I have been contemplating with a good deal of satisfaction how easily I could "take the wind out of their sails" by relating my own experience in carpentry work. When, lo! presto, change. There remained only a gentle zephyr in my own sails when I read the invitation to "beat the record" of Mrs. Griffith (page 121). But while I am not 79 years of age, I am a sort of semi-invalid, relegated to rural life to regain nerve force expended during a long stenographic experience. And while I do not make my own hives, I did make two bee-sheds last fall out of green oak inch lumber. The sheds are 16 feet long, 3 feet wide, and 3 feet high, with lean-to roofs covered with tar building-paper, and taut wires drawn over the upper and lower edges of the roofs and attached to the sides, to keep the wind from "raising the roofs."

I greatly fear our brother bee-keepers will have to look well to their laurels, or they will be taken away by their Twentieth Century sisters who can send a nail *straight* to its intended destination, manipulate a dull, broken-handled saw, and dextrously substitute a carving knife for a plane.

I may be tempted in the dim, distant future to confide to the dear sisters something about a beginner's first year (1902!) with 40 colonies of bees. But I shall have to enlarge my vocabulary before I could do it justice. Suffice it to say for the present, that the aforesaid beginner survived the ordeal, with a gain of a whole encyclopedia of experience, and a loss of a number of pounds of adipose tissue.

I enjoy the American Bee Journal much more now that "we girls" have exclusive right to a corner. L. S. R.

Ashtabula Co., Ohio.

Shouldn't wonder if L. S. R.'s gentle zephyr would create quite a breeze. It ought to, I am sure. Two such bee-sheds out of green oak lumber was no small undertaking—but let me whisper in your ear that when a woman makes up her mind to do a thing she usually does it, tools or no tools; but the description of the same is good, and will appeal to most of us, as we probably have had a similar experience. I had a good, hearty laugh over it.

Just ask the average man to use the same tools, and he would say—but, there, I am not going to tell you what he *would say*, you can imagine; but let me tell you, the average woman will make a creditable job with just about such an outfit.

Now, really, L. S. R., do you think it just right to tantalize us in this way? You know very well that we are just sighing to hear "about a beginner's first year, 1902." Do you think it sisterly to keep that whole encyclopedia of experience to yourself—now, do you?

I am very glad you enjoy our corner.

For Lovers of Honey-Comb.

The following was given in a daily paper:

"Cut the honey-comb from the box and put it in the dish in which you wish to serve it. Then stand it in a warm (not hot) oven. The wax will come to the top and can be easily taken off, leaving a nice, clear honey. In this way one may enjoy a pure, delicious honey without the disagreeable wax."

It seems rather contradictory to be talking about disagreeable wax to "lovers of *honey-comb*." Think of paying the extra price for comb honey only to melt it and reduce it to the form of the lower-priced extracted honey! Better tell that woman to buy a jar of "York's Honey!"

Life's "Little Things."

A German bee-journal gives the following:

"Our life is made up of little things. The things that count most in life are little things."

That's right; the business-end of the bee isn't a quarter of an inch long.

A Honey Cough Medicine.

An excellent cough medicine that may be made at home consists of olive oil, 2 ounces; paregoric, 2 ounces; honey, 2 ounces. Dose: One teaspoonful every two hours, if the cough is severe.—The Delineator.

❋ The Afterthought. ❋

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, O.

BEES CAN MANAGE THE POLLEN SUPPLY.

On the matter at the end of page 83, I find my mind protesting that our bees are not fools. They know when they need pollen—and it's exceedingly probable that they have some sense of it when they are getting an over-large supply on hand. Should hardly think so obvious a matter worth experimenting on. Pollen sometimes spoils on their hands; and then the work of clearing it out is sometimes a serious one—and as such put off in favor of the more pressing work of the hive. When bees have been accused of too much pollen I guess it's usually a reasonable stock of fresh pollen and a lot of damaged pollen, both on hand at once.

WAX-EXTRACTORS AND WAX-RENDERING.

Mr. H. H. Root, in an excellent article on wax-rendering, speaks of the sun-extractor as wasting wax. So it does if you throw the remainders away. Don't throw 'em away. In my experience they keep for an indefinite period. Looks to me like a good plan to keep the cake till a large amount is on hand and then work it over. Possibly in somebody else's method the worms would eat up the cake, but they don't with me. Notwithstanding the shortcomings of the solar wax-extractor, don't think of running an apiary without one.

Took him down a bit—that chap who sent a sample of the perfect work his press did. His cake was not all dough—three-quarters dough and one-quarter pure wax. Eighteen ounces of wax from five pounds of old comb was a very high order of success. Comb that has had much brood reared in it is not to be put in the solar at all. It is a serious matter to keep comb from being all eaten up while the happy leisure time to render it arrives. Box in a dark, cool cellar, and put there before any larvæ get hatched, is perhaps as promising a resource as any. Page 85.

KEEPING QUEENS FOR MAILING.

No doubt, Mr. Morgan, most queen-breeders keep young queens where for weeks they can lay but little—waiting orders—and scout the idea of it's doing them a particle of harm. Sometimes, however, the provoking chap who challenges the universal opinion and practice is the very one we ought to listen to a little. And so to have Mr. Stahmann wiped out with one prompt wipe, and never thought of more, is not just what I prefer to see. Page 86.

BEES IN A SNOWDRIFT.

I would say to J. M. Young, page 86, that the trouble with bees in a vast snowdrift is not that it smothers them, but that they are too comfortable, and start a ruinous amount of brood at the wrong time in the year.

HONEY TAKING UP WATER.

We knew very well that honey exposed to damp air gains water and gets thin—but we did not know exactly to what extent by weight. Would hardly have guessed that it adds 15 percent in quite ordinary circumstances, and in very favorable circumstances twice that. So thanks to the Canadian Chemist Shutt. Page 86.

RELIQUEFYING HONEY IN BOTTLES.

On page 87 it is said concerning reliquefying honey in glass bottles: "Loosen the corks." Is this absolutely necessary? I'm rather afraid it is; but still I cherish the idea that a sufficiently gentle application of heat in a warming-box will do the job nicely, and save corks, labels, and everything. But I'm thinking of high-class honey perfectly kept. Of course, if the honey was poor to begin with, or if it has grown poor with the lapse of time (as it sometimes does), it may froth on being heated and demand vent. Perchance the whole contents will have to be turned out and the bottle refilled.

BOTTOM STARTERS OF COMB FOUNDATION.

Interested to learn that bees build the bottom starter and the upper one together before enough honey is put in the top one to swing it out of perpendicular. Should have guessed there was a danger there, but have no experience with bottom starters myself. Page 88.

MELTING HONEY OUT OF WAX.

The last phrase on page 90—"taking off the cake of wax when cooled"—intimates that, of course, the heat will be high enough to melt the wax. As melting out honey without damaging it is one of the most difficult things we undertake, why not try more—much more—time, and a temperature below the melting-point of wax. The unmelted wax can be squeezed out. Am just now trying this on a pan of cappings that got solid before it drained. This one trial seems to be a success; but I should expect honey candied in the comb to be a little more stubborn.

Queenie Jeanette is the title of a pretty song in sheet music size, written by J. C. Wallenmeyer, a musical bee-keeper. The regular price is 40 cents, but to close out the copies we have left, we will mail them at 20 cents each, as long as they last.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

Carniolan Bees—Getting Increase.

1. Will Carniolan bees protect the hive, or colony, from wax-moths as well as the Italians?

2. Could I put a hive-body on each colony of bees, and when there is a large amount of bees, take off the top hive and move the old one, setting the top hive on the old stand, and introduce a queen safely, providing I have a honey-board between the two hives? I wish to increase the size of my apiary, and expect to buy several queens this spring, but do not know which breed would meet my requirements. The wax-moths are the worst thing we have to contend with.

ARKANSAS.

ANSWERS.—1. I don't know. Will some one please tell us? The Italians have great reputation in this regard.

2. Yes, but it might not prove the most satisfactory plan.

Putting Bees Out of the Cellar Early.

1. What will be the probable result if I put my bees out of the cellar, on the summer stands, a little too early? Will they not, when coming from the cellar, stand a little severe weather or freezing as well as bees that are out at the same time and have not been housed?

2. Did you mean to say that bees may be safely put out-of-doors when the buds on soft-maple begin to swell, or the sap run?

The days are warm, and my bees are getting restless. IOWA.

ANSWERS.—1. They will be likely to fly out when too cold, many bees being thus lost. I don't know that I can give you a satisfactory reason for it, but I don't believe a colony brought out of the cellar will stand severe March weather as well as one that has been out all winter.

2. No, if the soft-maple is to be taken as a guide, wait till it is out in full bloom.

Introducing Queens.

I bought an Italian queen last August, introduced her on the day of arrival. She was accepted all right, and assumed her duties at once. About two weeks afterward I was surprised to see young Italian workers about the entrance of the hive.

Why should a colony be left queenless 24 hours after removing the "old" queen, before introducing the "new" one? I have not handled many, but what few I have, have all been introduced just one hour after removing the old queen, and every one accepted. All that I introduced was in August or the first of September. Perhaps it would not work earlier in the season.

Yesterday (Feb. 26) was a warm, spring-like day. When near my house at noon, on the way to dinner, I could hear the humming of the bees, and on going out to the bee-yard it seemed as if there were a couple of swarms in the air. They were having a great flight.

I have 9 colonies in the cellar; they never did so well and kept so quiet as this year, to date. ILLINOIS.

ANSWER.—A colony of bees with a satisfactory queen will never accept another kindly within an hour of the removal of their own queen, and they are left queenless 24 hours or more, so that becoming conscious of their queenlessness they may be ready to accept any queen given them. You say you introduced them successfully within an hour of the removal of the old queen, but I feel pretty sure that they were caged, and the real introduction came hours afterward when the candy was eaten out and bees and queen had an opportunity to shake hands. Whether it is best to put the caged queen in the hive at the time of removing the old queen or some time later is a mooted question.

Feeding in the Cellar—Foul Brood—Extracting-Frames, Etc.

1. When bees are fed in the cellar at a temperature of about 40 or 45 degrees, will the queen go to laying and hatching brood?

2. Which is the best food for bees when they run short of stores in the winter, candy or syrup?

3. What are the chief causes of foul brood? I have never heard of a case in this section.

4. My hives are all 8-frame Langstroth hives. Would 10-frames be better, where the bees are confined to the cellar for five months?

5. I notice some give their bees flights during the winter. I see no way of doing it here, where the ground is covered with snow 5 months.

6. Will it be necessary to wire foundation in shallow extracting-frames to be used in a Cowan extractor?

7. Can 2 shallow frames be put in one basket of a Cowan extractor?

8. How much more honey should a good colony store by placing shallow extracting-frames with foundation, and extracting the same whenever filled, where the colony would store 50 pounds of comb honey?

9. Would it be wise to have Italians, red clover bees and Carniolans all in the same yard, and let them mix with each other?

NEW YORK.

ANSWERS.—1. Hardly, unless the feeding be kept up regularly for some time.

2. Candy.

3. The chief and the only cause is the presence of a microbe, *Bacillus alvei*, and the disease is generally conveyed to a healthy colony by means of honey from a diseased colony. A drop of infected honey no larger than a pin-head is enough to start the destruction of an entire apiary.

4. That depends. It would take less care on your part to prevent starving if you should change to the larger hives.

5. I think if you watch closely you will find that there is no place in the State of New York, probably, where there will not be at least one day warm enough for bees to fly before time to take them out for good.

6. They will at least be better for it.

7. Yes, if the frames are small enough, although it may not be the most convenient.

8. I don't know. The answer has been given all the way from nothing to two or three times as much, there being a great variation under different circumstances.

9. Yes, if you do not care about keeping either kind pure.

The Nucleus Method of Increase.

I am desirous of increasing my bees as much as possible. We have honey coming in during fruit-bloom, and a little during dandelion bloom, but after that not much until alfalfa and sweet clover, which commences the latter part of June and continues until the last of August or first part of September, then the honey comes in slowly.

We cut alfalfa three times. The first and second crops have plenty of time to bloom, and there is often quite a lot of bloom on the third crop.

1. Will it pay me to make nuclei and feed them between fruit-bloom and alfalfa (last week in June), to build them up, when honey is worth 5½ cents per pound? or will it pay the best to sell the honey at that price?

2. Can I increase fast by taking strong colonies and brush or shake the bees on foundation or starters in a new hive on the old stand, leaving the brood in the old hive in a new location, and give them a capped queen-cell, when enough bees have hatched from the combs, and feeding both with honey until the honey-flow is good in the field? Will this plan work, and pay?

I rear queens according to Doolittle's cell-cup plan. UTAH.

ANSWERS.—1. So long as you want the increase, better feed the nuclei.

2. The plan is not good for rapid increase. You can beat it with the nucleus plan.

Shaken Swarms.

In using the shaken-swarms process, how will it do to shake all the bees and queen of one colony, and nearly all the bees of another colony, into an empty hive, putting the two old hives together, one on top of the other, with one of the queens and just enough bees to care for the brood, in a new location? Will the colony having the brood be likely to cast a swarm? How would you work them, when the brood hatches confine them to one brood-nest, and put on a super? I want comb honey, and no increase. Would this plan work well?

OHIO.

ANSWER.—Somewhat the same plan as you propose is in use across the water. S. Simmins, of England, practices the plan given on page 67 of this journal. In Germany it is the practice of some to take all the brood from a shaken swarm and put it over another strong colony. Either of these plans leaves you with the same number of colonies. The Germans (and it was from Germany that the shaken-swarm plan came) say that when you put this force of brood over a strong colony, the colony thus strenghtened by so much brood will not swarm. Evidently, however, the colony would not be in the best condition right away for comb honey.

But why do you want to put one of the hives in a new location? and would you leave nothing on the old location? That wouldn't work, for you of course know that the field-bees would go back to their old location. Very likely, however, the two colonies you mean to operate upon are standing close together on the same stand, and then you would be all right. A little care must be taken not to leave too few bees on the same stand, for in a day or two all of its field-bees will have deserted it for the old stand, and it will be still weaker than you left it.

The colony with the brood will not be likely to swarm unless you take away some of its brood-combs.

Yes, the colony with the brood could be set to work on sections by reducing to one story. Neither would it be necessary to wait till the brood hatches (about three weeks), but perhaps in about ten days you could take away one story, leaving the combs with most sealed brood. There would probably be some danger of this colony swarming.

You express surprise that you find in "Forty Years Among the

Bees" that I don't like the Manum swarm catcher. That hardly gives the correct situation. If I should follow natural swarming, especially with unclipped queens, I should want to use it. But I don't like natural swarming, nor anything connected with it, and would probably succeed in making a failure of any sort of a swarm catcher.

Rendering Combs into Wax—Spring Feeding.

1. Give a good plan for melting up some wax when I have no solar wax-extractor. I do not have wax enough to pay to buy a solar machine.
2. Will a brass or copper vessel injure the quality of the wax?
3. Would you mix syrup with honey fed this spring?

ILLINOIS.

ANSWERS.—1. Take an old dripping-pan (a new one will do as well), split open one corner, and put in the pan your old combs or whatever is to be rendered. Put the pan in the oven of a cook-stove with the split corner projecting outside, of course leaving the door of the oven open. Put something under the inside corner of the pan, making it an inch or so higher than the split corner, so that when the wax melts it will run out. Set under the split corner a dish to catch the dripping wax, and there you are.

2. I don't know; I think not. Iron will darken it.

3. For spring feeding it will be a little better to have pure honey, but syrup will do very well.

Why Didn't the Queens Hatch?

Why did my queen-cells not hatch last summer? I practiced the Doolittle plan of making queen-cells. I used a common wooden rake-tooth to shape the cells. All the queens would live until about three days before hatching, and then die. I am a beginner, and ask for information.

MAINE.

ANSWER.—I don't know. Just now I think of only two things as most likely. One is, that the young queens may have been put where they chilled. The other is, that they may have been shaken.

Transferring Crisscross Combs.

I have some hives with comb all crosswise of the brood-frames, and would like to ask how to transfer the bees to another hive, without hurting the bees.

COLORADO.

ANSWER.—You can transfer them just as your text-book instructs you to transfer from a box-hive, or you may take the easier plan of turning the hive upside down, and with a handsaw cut loose any attachments of combs to the sides of the hive, and then lift the body of the hive off the combs Then you can easily get at the combs to deal with them as you please. If you wait till three weeks after the colony has cast a swarm, there will be no worker-brood in the way.

If the case is not very bad, and some of the combs are straight in the frames, lift out the straight combs, then cut enough to get out the others, and then straighten them in their frames.

Early Pollen-Gathering—Wiring Frames—Making Hives—Foot-Power Saw.

1. About 3 o'clock, p.m., Feb. 15, I went out to look at my bees. The sun was shining brightly, but the wind was blowing cold (in the morning it was 16 degrees below freezing), and I found them working quite freely, and some carrying in pollen. What is the reason they carried in pollen so early? Other years I saw the first pollen about the middle of March.

2. If I wire the shallow 6-inch frames, can I use extra-thin surplus foundation in them? How many wires ought I to put in, and where should they be?

3. Which is the best way to do, to have enough extracting-supers to last the whole season through and extract all at once, or put on one super and let the bees fill it almost full, then raise it up and put another under it, and then extract when it is full, and so on?

4. How many feet of lumber will it take to make 100 bee-hives, 10 frames, with four 6¼-inch extracting-super frames and all complete?

5. What do you know or think about the Barnes combined machines? I would buy one as soon as possible if I knew it would not run too hard. Can it be run with the foot to satisfaction?

6. Have you one, or do you make your bee-hives?

7. If it is too hard to run it with the foot, could I get a little pulley, and put it on the axle (as it might be called) of the big wheel, and put on some water-power? Would the pulley or belt be in the way?

8. If it can not be run with the foot, what are they made for?

9. There is a little ditch in front of my shop and bees, and there is running water there about a foot wide. How many horse-power is this equal to, running through a trough about 30 feet long, 4 feet lower at the bottom than at the top? Would it be better to have it incline about a foot, and let it fall about 3 feet on the water-wheel?

OREGON.

ANSWERS.—1. There was no unusual reason for their carrying in pollen on that date. Bees will always carry in pollen when it is warm enough for them to fly, if there is pollen to be had. But there must be something wrong with your thermometer if it marked 16 degrees below the freezing point when the bees were flying.

2. I don't know, but I fear you could not use extra-thin without four or five wires. You could probably use thin surplus foundation with two horizontal wires, one 2 inches below the top-bar and the other 1½ to 2 inches lower.

3. Dadant & Son are away up in producing extracted honey, and they have enough frames so they do not extract till the close of the season.

4. I don't know; I have never cut any bee-hives from the lumber since I gave up using box-hives. Any one, however, who can cut them out can figure up the amount of lumber. It will vary somewhat according to the boards used, some lengths making more waste than others. The work can be done to so much greater advantage at the factories where they are made by the thousand that I can not afford to do any of the work except to nail them together.

5 and 6. As already said, I do not make my own hives, and have never had any of the Barnes machines, but their reputation I know to be excellent.

7. I have had no experience in the matter, but there is little doubt that they could be rigged to run by any kind of power.

8. Those that are made for that purpose can be run by foot-power, and for some may be all right, as where no great amount of work is to be done, and extra help can easily be had; but unless a man has extra strength he will hardly want to run one alone all day long, if I am rightly informed.

9. I don't know. Any one who is entirely at home in such matters can have the floor.

Feeding Granulated Corn-Sugar.

What about granulated sugar made from corn? Would it do to make into syrup to feed bees in the spring, when they can fly every few days?

ILLINOIS.

ANSWER.—I never saw granulated sugar that was made from corn, but I have seen it in solid cakes, and there is probably not much difference. I think you need not fear any harm from feeding it to the bees *in the spring* when they fly every few days. But I wouldn't like to warrant that it will do any good, for it is somewhat doubtful whether the bees will take it.

Bees Rushing Out of Hives When Uncellared.

We have had trouble about our bees rushing out lively when taken from the caves and cellars, all getting mixed apparently, and when returning fill some of the hives full of bees and leave others badly weakened, so as to make it detrimental to the depopulated hives. Would a wet rag stuffed in the entrance be good, leaving only room for a few bees to pass in and out at once? or would simply closing the entrance almost entirely answer?

IOWA.

ANSWER.—I confess to you that there are things connected with your question that I don't understand. Every year, for many years, I have taken out my bees with a rush, taking them out so that all could have a flight that first day. Others say that when they do that the bees swarm out and make lots of trouble, but I have never had any serious trouble. Some say to take out a few each day. That would work badly here, for when it comes time to take bees out of the cellar there may not be two days in succession fit to take them out. Indeed, the two good days may be several days apart. Possibly one reason for the difference lies in the condition of the bees. The night before mine are taken out, doors and windows are open to the widest, and all night long they have fresh air. So, when they are taken out they do not feel the change of air, and often they do not fly out of the hive at all for some minutes after being put on the stands. If taken out of the close air of a cellar when they are very uneasy, they may get so excited that they will swarm out.

A *big* rag made *very wet* is one of the best things to lay against the entrance when you want to keep bees in temporarily, but I doubt that it would help any in the case under consideration. I would rather have the bees so quiet that there is no need to fasten them in. Try giving them a tremendous airing the night before taking out, and please report results.

Keeping Bees in a City.

1. If I kept a few colonies of bees on the roof of a barn in the city, would they be apt to sting or bother people passing by on the street? The barn is about 60 feet from the street.

2. Is a bee-keeper liable for damages if some one is stung in his vicinity?

3. As a rule, do bee-keepers in cities have much trouble with their neighbors about their bees?

4. Would the bees attack a horse in passing in and out of the barn?

WISCONSIN.

ANSWERS.—1. No, there would be scarcely a possibility of any trouble.

2. That's a question for lawyers to answer, each one for his own State, but under ordinary circumstances he would probably not be held accountable.

3. Very little, so far as I know; but, of course, they are generally careful.

4. Not likely, the flight of the bees being above where the horse passes.

FROM MANY FIELDS

Good Prospects for Clover.

Prospects are exceedingly good for the coming clover honey crop, with the bees wintering well, with plenty of good flights for those outside, and plenty of mild weather for all. There is not much frost in the ground—a thing which, in the past, has counted well for clover honey. FRANK COVERDALE.

Jackson Co., Iowa, Feb. 14.

Coldest Weather of the Winter.

This has been the coldest weather we have had this winter; it registered down to zero, and will damage the bees of this section a great deal. The bees have not had the proper care to stand so bad a spell of weather—they are left to take care of themselves. They swarmed so much last summer that 30 percent have already died. Those that have taken some interest in their bees say they were all right until this cold snap, and we don't know how they will get through this spell. It looks like snow, and the ground is covered with snow now. M. H. SOSSAMAN.

Franklin Co., Ark., Feb. 20.

Clipping Queens' Wings.

I would beg leave to differ from Gustave Leupold in regard to clipping the wings of queens. In an experience of 33 years in handling bees, probably one-third of the time with most of the queens clipped, while others were unclipped, I would rather take care of 100 colonies with clipped queens than 10 unclipped.

Hives with clipped queens must be set close to the ground, so the queen can return if the swarm is not discovered when they come out. Of course, if the hive is set 3 or 4 feet from the ground she will soon become food for ants or toads, if she is not able to return to the hive. The weeds and grass must also be kept down around the hives, and the hives put 6 feet or more apart. S. L. SHERMAN.

Mahaska Co., Iowa, March 4.

Last Season Nearly a Failure.

The past season was nearly a failure in this locality. From 52 colonies, spring count, I got about 900 pound-sections of honey, but swarms galore. The bees got honey enough to keep them in the swarming-fever, which they did in great shape. I doubled down to 77 colonies, which I put into winter quarters in very good condition. They are doing well up to this date, but I am some alarmed about the condition that they will be in in the spring, as the fall flow did not amount to anything, from which, of course, they would not breed late; it is the late brood that tells in the spring.

We are having an old-fashioned winter, 12 inches of snow on the level, and very cold weather; it has been as low as 42 degrees below zero. I have a bee-cellar that never freezes, so the cold weather does not worry me as far as the bees are concerned. I will report how the bees come out in the spring.

FRANK E. KNAPP.

Wadena Co., Minn., Feb. 20.

Missouri to Organize—Good Prospects.

I have just read the call for the organization of a Missouri Bee-Keepers' Association, which I heartily second, and have sent in my fee as a charter member. I have often wondered why such an organization was not formed long ago. Missouri has lots of bee-keepers, as the last census will show, and I hope before long to see a strong union of Missouri bee-keepers. I am as great a bee-enthusiast as ever lived. My grandfather was a

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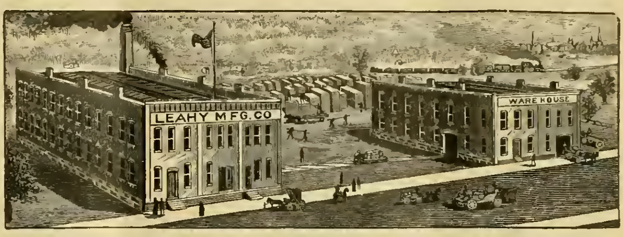

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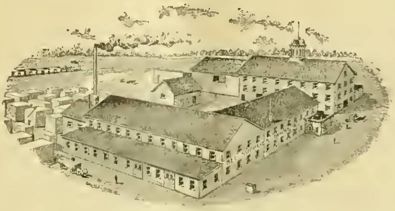

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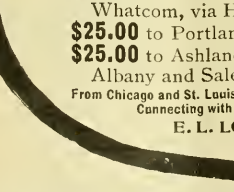

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great bee-keeper, settling in Missouri in 1840, when the woods were full of wild bees. He was an expert hunter, and had a barrel of wild honey every fall. My father followed him, and I am following both. I would rather hunt bees than do anything else I know of. There are still some wild ones, and I am known all over the country as the bachelor bee-hunter and bee-keeper, although I am only a young man yet.

I have some of the best bee-books which I read and study with pleasure. I have taken the "old reliable" American Bee Journal for four years, and I have every copy nice and clean.

We have the best prospect I ever saw for a good crop of honey next year. I hope it will prove so. H. S. CARROLL.
Shelby Co., Mo., March 6.

Season of 1902.

We had a poor honey season in 1902, but my bees averaged 100 pounds per colony, and still some increase.

I like the American Bee Journal and the gritty old Dr. Gallup. J. G. RYSTRUM.
Chisago Co., Minn., Feb. 23.

Prospect Better than Last Year.

We are just now having a much-needed rain, making the prospect much brighter, but even with this we are not yet fully assured of a honey crop, as the rainfall up to date is only a fraction over 9 inches; but the prospect is much better than at this time last year. GEO. W. BRODBECK.
Los Angeles Co., Calif., March 5.

No Cuban Bee-Keeping for Him.

I have just returned from a four months' sojourn in the island of Cuba, and now hasten to attend to my neglected business. I shall never own a single colony of bees on that island. If there is any place on this earth where eternal vigilance is the price of success it is in the island of Cuba. The bees are forever and always doing just the opposite of what the bee-keeper wants them to do. Deliver me from Cuban bee-keeping forever. THOS. BRODERICK.
Cayuga Co., N. Y., March 5.

He's Getting There.

I became interested in bees one year ago, knowing nothing about them at the time. I bought a colony of Italians and the Langstroth book, and subscribed for the American Bee Journal. I am getting there slowly.

I increased my one colony to three, got 10 pounds of honey, and found out I have a whole lot to learn. HARRY GREVES.
Hudson Co., N. J., March 9.

A Queen-Rearing Experience.

I have been very much interested in the discussion on queen-rearing in the Bee Journal lately. While I do not know much about it myself I have studied it a good deal, and have come to the conclusion that Mr. Alley's queens can not be as good as queens reared in the natural way, although Mr. Doolittle's plan may be all right, provided his colonies are good and strong.

Now, I will tell of a little experience I had with a colony. It cast a very large swarm; of course I looked for the queen, as she was clipped, and I failed to find her, and the swarm returned and clustered on the front of the hive and remained there eight days, after which a second swarm issued with a young queen; they clustered, and I hived them, and they did well that year (six years ago). The first swarm was still clustered on the outside of the old hive two days after they swarmed with the young queen, the old clipped queen came out, and the swarm that was clustered on the hive followed her. I caught and caged her, and moved the old to the new stand, and put another in its place, putting the caged queen on the alighting-board. When the swarm returned I let the queen run in with them, and they did well. The colony

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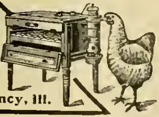

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Perfect in construction and action. Hatches every fertile egg. Write for catalog to-day.
GEO. H. STAHL, Quincy, Ill.
46A26t Please mention the Bee Journal.

SWEET CLOVER

And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5lb	10lb	25lb	50lb
Sweet Clover (white).....	$ .75	$1.40	$3.25	$6.00
Sweet Clover (yellow)....	.90	1.70	4.00	7.50
Alsike Clover	1.00	1.80	4.25	8.00
White Clover	1.50	2 80	6.50	12.50
Alfalfa Clover	1 00	1.80	4.25	8 00

Prices subject to market changes.

Single pound 5 cents more than the 5-pound rate, and 10 cents extra for postage and sack.

Add 25 cents to your order, for cartage, if wanted by freight, or 10 cents per pound if wanted by mail.

GEORGE W. YORK & CO.
144 & 146 Erie Street, - CHICAGO, ILL

with the young queen wintered well and started swarming early; they swarmed six times, and I took over 100 pounds of extracted honey from the hives, not counting the swarms, which have as much as 150 pounds more, as I extracted from two of them, and wintered four of them without feeding. That was a queen reared under the swarming impulse. EDWARD KNOLL.

Grey Co., Ont., March 2.

Shaken Swarms—Catnip.

Shaken swarms — how about the extra frames (sometimes)? Melt the old combs into wax, is it? Old combs are best, sometimes. Ah, law! Mr. Aikin (page 119); the brood might be half and half above and below. Then, my!

Don't be too hard on Dr. Gallup. Experience sometimes is a good teacher. I have seen the big queens with the big colonies myself, and the longest-lived ones, too.

I will try to tell something about catnip some time. My bees are wintering on it partly this winter. HAWKEYE.

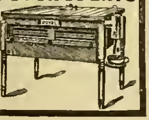
Hard Winter on Bees.

This winter has been a pretty hard one on bees, compared with former winters.

December was unusually cold, and the ground was kept covered with snow. Only on the first and last days of that month had the bees a flight, and on Dec. 4, 25 and 26 the mercury went down 2 degrees below zero.

January proved to be somewhat better; the snow gradually melted away, and my bees had a flight on Jan. 1, 3, 6, 15, 16, 25 and 31. We had but two zero days—Jan. 11 and 12.

February was the meanest month so far. Bees flew on Feb. 1, and celebrated Washington's birthday in fine order, as all dutiful and



TRY IT FIRST FOR 30 DAYS
That's the way we sell the
ROYAL INCUBATOR,
the best self-regulating, automatic incubator in the world. It works perfectly. If not satisfactory in every way send it back. Catl'g free.
ROYAL INCUBATOR CO.,
Dept. 78, Des Moines, Iowa.

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800 lbs. of Honey One Season

From one col.; 5 tons comb honey from 33 cols. one season. First to advertise bees that would store honey from red clover 30 years ago. Fine Queen Mothers a specialty. Originator of Golddust strain of Rose Comb Buff Leghorns—largest and best layers of all Leghorns. My circular tells you all. **F. BOOMHOWER,**
12A2t GALLUPVILLE, N.Y.

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GOOD SEEDS
SEND AT ONCE
25c for our great Garden Seed Collection. 10 big packages finest vegetables. 25 varieties for 50c.
25c for our beautiful Flower Seed Collection. 10 large packets beautiful flowers. 25 varieties for 50c.
Both 25c Colls. for 40c—both 50c Colls. for 75c.
Illustrated catalog and culture book free with each order.
MISSOURI VALLEY SEED CO.,
P.O. Box 557, "*The Good Seed Store.*" St. Joseph, Mo.

6A8t Please mention the Bee Journal.

TREE GROWN FROM SELECTED BEARING TREES
FREIGHT WE PAY IT
FREE OUR BOOK HOW TO GROW FRUIT SEND FOR IT
TITUS NURSERY NEMAHA NEB
3A11t Please mention the Bee Journal.

Wanted to Purchase

200 to 400 colonies of BEES—northern California, Oregon or Texas. State price, f.o.b. cars; also kind of hive, with and without supers; and condition of bees, about April 1st to 10th.

Address, DR. GEO. D. MITCHELL & Co.,
12Atf 329 Wash. Avenue, OGDEN, UTAH.

Please mention Bee Journal when writing

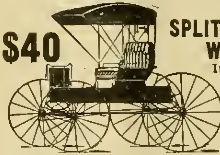
SPLIT HICKORY BARGAINS!

The following vehicles are all of the celebrated Split Hickory make and are sold direct to user from factory at factory prices. We send them anywhere on

30 Days' Free Trial

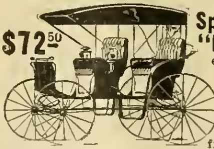
and absolutely guarantee them for two years from the time they leave our factory. Our 1903 catalogue is now ready and contains hundreds of exclusive styles of vehicles and harness of every description. It is free and you should send for it before buying a vehicle or harness. We manufacture every vehicle we offer for sale. If you get a Split Hickory you are sure of getting something that will please you and a bargain. Remember you can only buy a Split Hickory of us direct as we do not sell jobbers or dealers.

This is our **SPLIT HICKORY HUMMER** **$35**
Has 30 oz. full rubber top, split hickory wheels, best steel axles & springs, finely finished, neat, strong and substantial, the best value ever offered at the price.
Sold on 30 days' free trial and if it don't prove itself a bargain and if you don't consider you have saved $15.00 send it back.



$40 Our **SPLIT HICKORY WINNER**
It not only wins trade for us, but praise from every user. Has genuine leather quarter top, spring cushion and back, boot, carpet, double braced shafts, in fact everything complete and up-to-date. Is roomy, comfortable, easy riding and light running. Everyone shipped on trial, no questions asked if not satisfactory; just send it back if it isn't $20.00 cheaper than equal quality at retail.

And here is our **SPLIT HICKORY SPECIAL** **$47.50**
the buggy that won such favor in every state in the union last year. Impossible to give description here. Has 100 points of merit. Nothing like it every offered vehicle buyers before. We only ask a comparison with a $65.00 buggy at retail and if, in your judgment, it isn't better don't keep it. Costs you nothing for the trial.



$72.50 This is our **Split Hickory "FASHION"** extension top **SURREY**
Roomy, comfortable, strong and substantial. Equal to surreys that retail for from $100 to $125. Will last a lifetime. Everyone shipped on 30 days' free trial and guaranteed two years.

Write at once for our free catalogue of vehicles and harness; a penny spent for a postal may save you $25.00. Remember there is only one place to get **Split Hickory Vehicles** and that is at our factory. We have no agents.

OHIO CARRIAGE MFG. CO.,
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POULTRY PAYS

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when the hens lay. Keep them laying. For hatching and brooding use the best reasonable priced Incubators and Brooders — built upon honor, sold upon guarantee,
THE ORMAS
L. A. Banta, Ligonier, Indiana

46A20t Please mention the Bee Journal.

PENCILARIA the money maker for farmers.
Produces four times as much hay as clover, twice as much as cane, millet or any other plant, and of better quality. One lb. will plant an acre. Per lb, 75c, ¼ lb. 25c, sample free if you mention this paper. Large illustrated catalogue of Garden and Farm Seeds. **Seed Corn**, etc., **FREE.** **IOWA SEED CO., Des Moines, Iowa.**

HIGGINSVILLE BEE-SUPPLIES.

We have received a car-load of these unique suppplies this year and are nearly all sold. We expect to order another car soon. These goods are equal to if not the best on the market. Give us a trial order. We are also agents for the PROGRESSIVE BEE KEEPER, price 50 cents per year. Send your orders and subscriptions to us. We sell at factory prices.

TOPEKA SUPPLY HOUSE,
TOPEKA, KAN.

A COOL MILLION
of Snowy Wisconsin Sections, and 10,000 Bee-Hives, ready for prompt shipment. Send for catalog—it's free.
3A13t **R. H. SCHMIDT & CO., Scheboygan, Wis.**

TO BE GIVEN AWAY.
For Next 30 Days Only,
we will mail our fine valuable Poultry Book FREE. Tells you all about poultry, how to make big money with poultry and eggs; contains colored plate of fowls in their natural colors. Send 10c for mailing and postage.
JOHN BAUSCHER, JR., Box 94, FREEPORT, ILL

The Danz. Hive—
The Comb Honey Hive.
We sell it. We are authorized jobbing agents for **THE A. I. ROOT CO., for Michigan.** Send us a list of the goods you want for this season, and let us quote you prices. Beeswax wanted. Send for catalog. **H. M. HUNT & SON,**
10A17t **BELL BRANCH, MICH.**

25 Colonies Bees For Sale.
All in dovetail Langstroth hives, wired frames with full sheets foundation, 2 supers on each hive, with modern super furniture: 28 empty hives, brood-chamber with full straight combs on wired frames, combs in good condition; 2 furnished supers on each hive; lot of other bee-keepers' supplies, wax-extractor, etc.
12A2t **FRANKLIN MOORE, Baileyville, Ill.**
Please mention Bee Journal when writing

DAIRYMEN ARE DELIGHTED
to meet those who work for us. Cow keepers always have money. We start you in business. You make large profits. Easy work. We furnish capital. Send 10 cents for full line of samples and particulars.
DRAPER PUBLISHING CO., Chicago, Ills.

Missouri Valley Seed Co.—The above seed house makes a special offer in our columns on both vegetable and flower collections, which will interest many readers. What is found there is only a suggestion of the good things and character of prices given in this catalog. The house is perfectly reliable, and any one taking advantage of these liberal special offers will not be disappointed. That will bring along the Company's late catalog and culture book which is filled with suggestions of what to plant in vegetables and flowers, and directions for the growing. The house is located at St. Joseph, Mo., where they have all facilities for furnishing best seeds in infinite variety. See their advertisement elsewhere, and please mention the American Bee Journal when writing.

If you want the Bee-Book
That covers the whole Apicultural Field more completely than any other published,
send $1.20 to
Prof. A. J. Cook, Claremont, Cal.,
—FOR HIS—
"Bee-Keeper's Guide."
Liberal Discounts to the Trade.

Helper Wanted
Young man with some experience to assist in large apiary in Chicago, close to church and city; everything modern. To help man with years of experience who is also a thorough mechanic. Give age, experience, wages wanted, reference, etc. Address, **G. PURPLE,**
Care American Bee Journal,
144 E. Erie Street, CHICAGO, ILL.

patriotic bees should. We had five zero days in February, and it was 14 degrees below zero on Feb. 16. So far, we have had 41 inches of snow, of which about 6 inches on the level remains.

There has been a larger percentage of dead bees this winter than usual; but take it all in all I can say that my bees have wintered well. But we still have about eight weeks before we can say that we are out of the woods. I expect that losses in wintering about here will be heavy before we have reached the month of May. WM. STOLLEY.

Hall Co., Nebr., March 5.

Bees Wintering Well.

We had the finest weather from Feb. 24, and every day got warmer. Feb. 26 we put the bees out, and they had the finest flight.

November 18 we put 53 colonies in the cellar, and not one of the colonies died; they are all strong and heavy. And, oh! what joy to see how they were gathering water and to hear their joyful hum. During that time my daughter cleaned the cellar and opened the windows to let fresh air in, and so all was finished to take them in again. The evening was warm, and the sky clear, so I thought we will let the bees out, as the next day would be a nice one, too, so we covered them with carpets, blankets and bags. In the morning, when I awakened, I heard it raining, so I got up and wakened the children—it was 3:30 a.m.—and in one hour we had the bees all safe and dry in the cellar. They are in such good condition that I only wish for a good, big nectar-flow in all flowers and blossoms.

THEODORE STEGER.

Washington Co., Wis., March 3.

Black Bees vs. Italians.

Last year I obtained 12 colonies of black bees. I won first prize on their honey, at the Clark County Fair, over honey stored by Italian Bees.

On page 109, the article about "Italian Bees—Smoke for Foul Brood," I differ from. The writer says they are the best workers in every respect. Answer: Cracker-barrel oratory.

1. Size prevents rapid action. The black bees are more active and nervous.
2. Queens vary in that respect; I don't think color has anything to do with it, or breed.
3. They have to be crowded to it.
4. That will occur with both, and can be prevented.
5. They all believe in protection.
6. My blacks are in dovetailed hives, and it has been 30 below zero where they stand; they are in good shape yet.
7. Swarming depends on the season.
8. Clipped queens are all right. You must be with the bees in swarming season. Don't depend on the dinner-bell. In case a queen is lost, remove the old hive from the stand,

That New Work
ON QUEEN-REARING now ready to mail. Contains hundreds of new ideas on queen-rearing. Book and Tested Breeding Queen, $2.00.
Address, **HENRY ALLEY, Wenham, Mass.**

HIGGINSVILLE BEE-SUPPLIES.
We have received a car-load of those unique supplies. These goods are equal to if not the best on the market. Give us a trial order. We are also agents for the PROGRESSIVE BEE-KEEPER, price 50 cents per year. Send your orders and subscriptions to us. We sell at Factory Prices.
WALKER-BREWSTER GRO. CO.,
423 WALNUT ST., KANSAS CITY, MO
Also dealers in honey and beeswax Catalog free.

Counting Chicks Before-Hatching
is not safe unless you have an
IOWA ROUND INCUBATOR
R. C. Bauerminster, Norwood, Minn., got 493 chicks from 503 eggs. He followed directions, the machine did the work, because it was built on right principles and by good workmen. The **IOWA** has fiber-board case, does not shrink, swell, warp or crack. Regulation and ventilation perfect. Our free book gives more testimonials and full particulars. Everything about incubation free.
IOWA INCUBATOR COMPANY, BOX 198, DES MOINES, IOWA
Please mention Bee Journal when writing.

HIGH CARBON COILED SPRING STEEL WIRE **FENCE**
CATALOGUE FREE. **INDIANA STEEL & WIRE CO. BOX 529, MUNCIE, INDIANA.**
5Dtf Please mention the Bee Journal.

GREAT CROPS OF
STRAWBERRIES
And How to Grow Them.
The best book on strawberry growing ever written. It tells how to grow the biggest crops of big berries ever produced. The book is a treatise on **Plant Physiology**, and explains how to make plants bear **Big Berries and Lots of Them.** The only thoroughbred scientifically-grown **Strawberry Plants** to be had for spring planting. One of them is worth a dozen common scrub plants. They grow **BIG RED BERRIES.** The book is sent free to all readers of the American Bee Journal. Send your address to
R. M. KELLOGG, Three Rivers, Mich.
3D6t Please mention the Bee Journal.

BIG BARGAINS IN BUGGIES
$27.50 is all that you have to pay for one of our full-rigged Top Buggies. Oil tempered springs, fine finish; worth double the price We make harness too. Write for Catalog and liberal agency plan.
Write for Catalog
ECONOMY BUGGY CO.,
Box A 53 Cincinnati, Ohio.
9D6t Please mention the Bee Journal.

Say, all Bee-Keepers,
One Question, Please.
If you were offered a hive that would save you one-half of your time and labor in its manipulations; one that would save you more than $1.00 in costs of extras; or a double-wall hive for the price of a single-wall hive, would you not investigate its claims or merits? The **20TH CENTURY IDEAL** does all the above. Then why not be on time and send for circulars to day? See THE REVIEW for February, pages 48 (excuse errors on that page) and 60. Also GLEANINGS, pages 72 and 164. Book and hive are two of the grandest "hits" of the age. Order book **NOW.** Price, 25 cents; and your money back if you are not satisfied.
T. K. MASSIE,
11D2t TOPHET, SUMMERS CO., W. VA.
Please mention Bee Journal when writing

BOYS WE WANT WORKERS
Boys, Girls, old and young alike, make money working for us. We furnish capital to start you in business. Send us 10c stamps or silver for full instructions and a line of samples to work with. **DRAPER PUBLISHING CO., Chicago, Ill**

Marshfield Manufacturing Company.
Our specialty is making **SECTIONS**, and they are the best in the market. Wisconsin BASSWOOD is the right kind for them. We have a full line of BEE-SUPPLIES. Write for free illustrated catalog and price-list.
Marshfield Manufacturing Company, Marshfield, Wis.
6A26t Please mention Bee Journal when writing.

take out a frame of bees, shake them gently around the entrance where the old hive stood, and they will cluster about the queen, if she has not been killed or gone off with the swarm.

9. Wisconsin bees sting.

10. For foul brood, if the case is so bad that it needs treatment from spring until fall, burn all diseased parts of the hive with the bees. HOMER C. STONE.

Clark Co., Wis., Feb. 24.

Forced or Shaken Swarms.

I note what Mr. Cary says, on pages 123 and 124, where he challenges my statement on page 55, wherein I say: "As to forcing before or after cells are started, it doesn't make any difference; only if the apiarist has as many colonies as he wishes, he should force only those that have cells started, as they would swarm anyway."

I thought my meaning was clear, that as far as the swarms were concerned it made no difference; but as to the disposition of the parent hive it makes quite a difference. If the swarm is forced before the cells are sealed the parent hive should be given a ripe cell or a queen. I am a firm believer in strong colonies at every stage, and do not believe in rearing queens with a pint of bees. Still, I am not ready to swallow all that is advanced on the side of strong colonies, especially the "umbilical" part.

I was trying to impress that as to the method of swarming there was no difference between the forced and the natural, so far as the swarm is concerned, provided the bees are made to fill themselves with honey. As to the old stand, the combs can be used to build up weak colonies, or a second drive or shaking can be made in seven or eight days later, or any other disposition can be made as the apiarist chooses. There is nothing new or complicated about forced swarming, and the only thing that surprises me is the space that is given to it. The method is all right, and nearly indispensable to the specialist, and I am inclined to think they all practice it more or less. J. T. HAIRSTON.

Cherokee Nation, Ind. Ter., Feb. 23.

CONVENTION NOTICE.

Utah.—The spring meeting of the Utah State Bee-Keepers' Association will be held in the City and County Building, Salt Lake City, April 5, at 10 o'clock a.m. All bee keepers of Utah and adjoining States are cordially invited to be present. J. N. ELLIOTT, Sec.

E. S. LOVESY, Pres.

Standard Italian Queens

OF THE HIGHEST GRADE,

Bred in Separate yards from superior stock of Golden and Leather-colored Strains. Selected from among the best stock of Long Tongue Clover and Honey-Queens in America. Bred by us with the greatest care for business. No disease among our bees. Our elevated country, with its pure mountain air and pure sparkling spring water furnishes the ideal place of health for bees and man. See our circular for the rest.

Queens sent out last season by us arrived in the very best shape, except a few got chilled late in the season in the North. Our Queens have gone to California, Oregon, Canada, Colorado, Cuba, New Mexico, and many of the States. We rear all queens sent out by us from the egg or just-hatched larva; in full colonies. Our method is up-to-date. If you want to know what we have, and what we can do, in the way of fine, large, prolific QUEENS, and how quick we can send them, just give us a trial order.

Prices: Untested Queens, $1.00; 6 for $5.00; 12 for $9.00.

Tested, $2.00; Select, $3.00; Best, $5.00.

Full Colonies, with Tested Queen, $6.00.

3-frame Nuclei, wired Hoffman frames, no Queen, $2.00; 2-frame, no Queen, $1.50. (Add price of Queen wanted to price of Nuclei.)

Special rates on Queens by the 100. Safe arrival and satisfaction guaranteed. Shipping season begins in April. Write for circular. It is FREE. T. S. HALL,

13Atf JASPER, PICKENS CO., GA.

SELF REGULATING AND AUTOMATIC MOISTURE | INCUBATORS AT CUT PRICES | 2 YEAR GUARANTEE
$4.49 @ 50 EGG SIZE | $7.99 @ 100 EGG SIZE | $11.49 @ 200 EGG SIZE | WHY PAY MORE
INVINCIBLE HATCHER CO. | No. 53 CAT. FREE ESTD. 1893 | SPRINGFIELD, OHIO.

Bees For Sale.

100 17 frame-Hive Colonies at ....$3 50 each
150 3-frame Nuclei at .... 2.00 each

13A5t G. W. GATES, Bartlett, Tenn.

SHEEP MONEY IS GOOD MONEY and easy to make if you work for us. We will start you in business and furnish the capital. Work light and easy. Send 10 cents for full line of samples and particulars.
DRAPER PUBLISHING CO., Chicago, Ills.

HIGGINSVILLE BEE-SUPPLIES.

We have received a car-load of these unique supplies. These goods are equal to if not the best on the market. Give us a trial order. We are also agents for the PROGRESSIVE BEE-KEEPER, price, 50 cents per year. Send your orders and subscriptions to us. We sell at factory prices. W. D. FULTON,
Catalog Free. Garden City, Kan.

Having had 5 years' experience in Rearing Queens and having a breeding queen that is two years old, whose bees are so gentle they can be handled most of the time without smoke, besides being the greatest honey-gatherers I ever saw, I have decided to offer her daughters during the season of 1903 at the following prices. Terms cash:

Reared by Doolittle Method.
Untested Queen, 75c; 6 for $4.00
Tested Queen, $1.00; 6 for 5.00

Natural Swarming and Supersedure.
Untested Queen, $1.25; 6 for 6.00
Tested Queen, $1.75; 6 for 9.00

CHESLEY PRESSWOOD, McDONALD, TENN.
13D4t Please mention the Bee Journal.

BEES FOR SALE.

65 colonies of bees, 46 of which are in Root's dovetailed hives, and the remainder in chaff-hives. Apply to
13A2t JAMES McKAY, Tuscola, Mich.

Wanted TO BUY 30 to 50 colonies of Bees on Hoffman frames. Address, H. JOHANSEN, Fremont Hotel, 19 South Clark St., Chicago, Ill.
13Atf Please mention the Bee Journal.

AN OPPORTUNITY.

Barred Plymouth Rock Poultry, Strawberry Plants, Bee Fixtures. Send for circular.
J. F. MICHAEL,
13A4t R. 6. WINCHESTER, IND.

For Sale 30 COLONIES of Italian Bees, in Langstroth and Simplicity hives. Price from $5.00 to $7.00 per colony. Satisfaction guaranteed. JOHN HERBERT,
13A2t HAMPSHIRE, KANE CO., ILL.

California! If you care to know of its Fruits, Flowers, Climate or Resources, send for a sample copy of California's Favorite Paper—

The Pacific Rural Press,

The leading Horticultural and Agricultural paper of the Pacific Coast. Published weekly, handsomely illustrated, $2.00 per annum. Sample copy free.

PACIFIC RURAL PRESS,
330 Market Street, - SAN FRANCISCO, CAL

BASSWOOD TREES.

One to two feet .... 25 for $1.00; 100 for $3.00
Two to three feet ...... 25 for 1.25; 100 for 4.00
Three to four feet .... 25 for 1.50; 100 for 5.00
12A3t G. W. PETRIE, Fairmont, Minn.

Please mention Bee Journal when writing.

The Emerson Binder.

This Emerson stiff-board Binder with cloth back for the American Bee Journal we mail for but 60 cents; or we will send it with the Bee Journal for one year—both for only $1.40. It is a fine thing to preserve the copies of the Journal as fast as they are received. If you have this "Emerson" no further binding is necessary.

GEORGE W. YORK & CO.,
144 & 146 Erie Street, CHICAGO, ILL

HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, March 7.—The demand for comb honey has been and is of small volume, prices are weak, concessions being made where necessary to effect sales. Fancy white comb held at 15@16c; all other grades of white are irregular at 13@14c; light amber, 10@12c dark and ambers, 9@10c. Extracted, clover and basswood, 7@8c; other white grades, 6@7c; amber, 5½@6½c. Beeswax steady at 30c.
R. A. BURNETT & CO.

ALBANY, N. Y., Mar. 14. — Honey demand quiet; receipts and stock light. Comb selling, light, 15c; mixed, 14@15c; dark, 13@14c. Extracted, dark, at 7@7½c. Beeswax firm, 30@32c.
H. R. WRIGHT.

KANSAS CITY, Mar. 14.—The demand for both comb and extracted honey is better, receipts light. We quote as follows: Extra fancy white comb, per case, $3.40; strictly No. 1, $3.30; No. 1 amber, $3@$3.25; No. 2, white and amber, $2.50. Extracted, white, per pound, 7c; amber, 6@6½c. Beeswax, 30c. C. C. CLEMONS & CO.

CINCINNATI, March 11—The demand for extracted honey is good at the following prices: Amber, barrels, 5½@6½c, according to quality; white clover, 8@9c. Fancy comb honey, 15½@16½c. Beeswax strong at 30c.
THE FRED W. MUTH CO.

NEW YORK, March 5.—There is a fair demand for white comb at 15c per pound for fancy, 13@14c for No. 1, and 12c for amber, with sufficient supply to meet the demand. Dark honey will be cleaned up with very little left; it is selling at about 11c per pound. Extracted rather weak and in quantity lots, prices generally shaded. We quote: White, 7@7½ cents; amber, 6½@7c; dark, 6c. Beeswax scarce at 30@31c for good avrage. HILDRETH & SEGELKEN.

CINCINNATI, Mar. 7.—The comb honey market has weakened a little more; is freely offered at following prices: Fancy white, 14@15c; no demand for ambers whatever. The market for extracted has not been changed and prices are as follows: Amber in barrels, 5¼@5½c; in cans 6@6½c; white clover, 8@8½c. Beeswax, 28@30c.
C. H. W. WEBER.

SAN FRANCISCO, Mar. 11.—White comb honey, 12½@13½c; amber, 9@11c; dark, 7@7½c. Extracted, white, 6¾@7¼c; light amber, 5¾@6c; amber, 5@5¼c; dark, 4@4½c. Beeswax, good to choice, light 27@29c; dark, 25@26c.

Demand is fair on local account for water-white, uncandied, but there is not much of this sort obtainable. Market for same is firm at ruling rates. Candied stock and common qualities are going at somewhat irregular and rather easy figures, holders as a rule being desirous of effecting an early clean-up.

WANTED WHITE CLOVER EXTRACTED HONEY!
Send sample and best price delivered here; also Fancy Comb wanted in no-drip cases.
THE FRED W. MUTH CO.
32Atf Front and Walnut, CINCINNATI, OHIO.

Please mention Bee Journal when writing.

$300,000,000.00 A YEAR and you may have part of it if you work for us. Uncle Sam's poultry product pays that sum. Send 10c for samples and particulars. We furnish capital to start you in business. Draper Publishing Co., Chicago, Ill.

FREE FOR A MONTH....

If you are interested in Sheep in any way you cannot afford to be without the best Sheep Paper published in the United States.

Wool Markets and Sheep

has a hobby which is the sheep-breeder and his industry, first, foremost and all the time. Are you interested? Write to-day.

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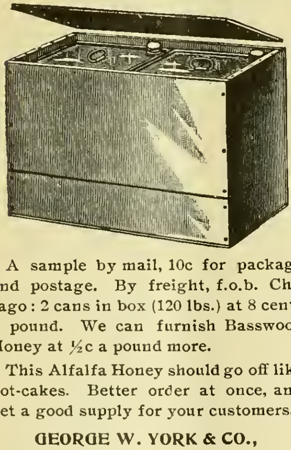

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We mention here a few booklets, pamphlets, etc., which we will mail free upon application to parties interested. If you wish the whole number, enclose five cents for postage.

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BEES AND QUEENS is an 8-page booklet containing much valuable matter on the subject of queens; reasons why they don't lay; test of purity, etc. It also names price on imported and domestic, Italian and Carniolan queens, as well as nuclei and full colonies.

FACTS ABOUT BEES is a 72-page booklet by F. Danzenbaker. It is of especial interest to producers of fancy comb honey. It deals chiefly with the Danzenbaker hive; drawings are used to show the construction of the hive and the manipulations to secure the best results. A number of pages are devoted to reports of bee-keepers who have used this hive. Ninth edition now ready. Mailed for 2-cent stamp.

OUTFITS FOR BEGINNERS is a little pamphlet giving the initial steps necessary for one to make a successful start in bee-keeping. It also includes a number of outfits, and names prices of same.

FOOD VALUE OF HONEY is a 14-page leaflet by Dr. C. C. Miller. Tells why honey should be eaten in preference to other sweets, and includes many cooking recipes in which honey is used. This is intended for free distribution by producers to stimulate a greater demand for the sale of their honey. It can be printed with the producer's card on the front cover and advertisement on the back, if desired, very cheaply.

SEED CATALOG will soon be ready. This lists seeds for the garden, seed potatoes, basswood seed and trees, alsike, white Dutch, medium and mammoth red clover seed, alfalfa, sweet and crimson clover seed, buckwheat, rape, cow peas, turnip, sunflower, soja beans and coffee berry, borage, catnip, dandelion, motherwort, figwort, mustard, spider plant, portulaca, Rocky Mountain bee-plant, sweet peas and other seeds; thermometers, barometers, powder guns, insecticides, tobacco-dust, sprayers, hot-bed sash, starting boxes, potato-planters, transplanting machines, etc.

RUBBER STAMP CATALOG illustrates and describes self-inking stamps, molding and block stamps to be used with ink pads; model and U. S. band daters; ink pads and ink for renewing same; interchangeable stencils; metal bodied rubber type and holders, and printing wheels.

LABEL CATALOG includes samples of one, two and three color work; also labels printed on three colors glazed paper; price-lists for the printing of circulars, catalogs, letter, note, statement and bill heads; shipping tags, envelops, business cards, etc.; display cards, caution cards for shippers of comb honey, etc.

SPANISH CATALOG is an abridged edition of our regular catalog of Bee-Keepers' Supplies, and is of interest to Spanish readers only. Give us the names of any of your Spanish friends interested in bee-keeping.

The A. I. Root Company,
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Honey-Houses, Poor Crops, Co-operation.
F. GREINER.

Importance of Bacteria to Alfalfa.
J. E. JOHNSON.

APR 3
COLLEGE.

AMERICAN BEE JOURNAL

43d Year. CHICAGO, ILL., APRIL 2, 1903. No. 14.

WEEKLY

N. E. FRANCE,
General Manager National Bee-Keepers' Association.

THE AMERICAN BEE JOURNAL

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DEPT. EDITORS,

DR. C. C. MILLER, E. E. HASTY, EMMA M. WILSON

IMPORTANT NOTICES.

The Subscription Price of this Journal is $1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

The Wrapper-Label Date of this paper indicates the end of the month to which your subscription is paid. For instance, "dec03" on your label shows that it is paid to the end of December, 1903.

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The book contains 328 pages, is bound in handsome cloth, with gold letters and design; it is printed on best book-paper, and illustrated with over 100 beautiful original half-tone pictures, taken by Dr. Miller himself. It is unique in this regard.

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Or, any present regular subscriber to the American Bee Journal whose subscription is paid in advance, can have a copy of Dr. Miller's new book *free as a premium* for sending us **Two New Subscribers** to the Bee Journal for one year with $2.00. This is a magnificent offer, and should be taken advantage of at once. For many of our readers it is not only an easy way to earn a copy of the book, but at the same time they will be helping to extend the subscription list of the old American Bee Journal, and thus aiding also in spreading the best kind of apicultural information among those who would be successful bee-keepers.

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IN MAY, 1903

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ESTABLISHT IN 1861
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THE OLDEST BEE-PAPER IN AMERICA

43d YEAR. CHICAGO, ILL., APRIL 2, 1903. No. 14.

Editorial.

Improvement of Stock.—It may seem like harping a good deal on one string, but the matter is one of so much importance that it warrants a good deal of repetition, and besides there are some new members of the American Bee Journal family that perhaps need telling for the first time. Those who have been working faithfully, perhaps for years, in the direction of the best stock obtainable, can skip this.

No observing bee-keeper has failed to notice the disparity of results often obtaining between two colonies sitting side by side. To all appearance one colony is as strong as the other, conditions are the same for each, yet one stores twice as much as the other. The only way to account for the difference is by attributing it to the difference in stock, and that is equivalent to saying that the difference in results is caused by the difference in queens, for the character of the stock depends upon the character of the queen.

If you have in any one of your colonies a queen that is satisfactory, well and good. If not, make up your mind here and now that you will try to get from some source a queen that will be likely to improve your stock. The matter is the more hopeful because the introduction of fresh blood will at least score one point of gain.

Having one good queen you will have one good colony, and having one good colony the road leading to improvement of other colonies is neither long nor difficult. Of this, more hereafter.

◆

Breeding from Freaks has been condemned by F. B. Simpson, those queens being considered freaks whose workers make very exceptional work in storing. Others, however, insist upon the rule, "Breed from the best," whether those "best" be considered freaks or not. The Rocky Mountain Bee Journal, usually very reliable in giving advice, seems to take ground in the matter that is a little difficult to understand. A correspondent writes:

> I had one new swarm that commenced work in the brood-chamber and super at the same time, and stored 95 pounds of first-class section honey. I contemplate rearing queens from this colony.

To this the Rocky Mountain Bee Journal replies:

> It would be better, perhaps, to purchase a tested queen of some reliable breeder to use as a basis, rather than the freak colony you mention. As a rule, it is the experience of breeders that freaks rarely reproduce themselves, but usually revert to the opposite extreme. G. M. Doolittle, by carefully selecting mother-queens that have made the best averages, during a period of over 30 years, has very greatly increased the average yield per colony in his apiary.

But were those not precisely freaks that Mr. Doolittle used? Unless he has been misunderstood, he simply bred from those whose workers gave largest yields.

◆

Cleaning Propolis Off the Hands.—One of the most convenient things to use is butter; not better than lard or other grease, perhaps, but generally more conveniently at hand. Take just a little butter, rub it on the glue till the glue scrapes off readily, then wash with soap and water—preferably hot water.

◆

Aikin's Bologna-Sausage Package for honey takes up no less than seven pages of space in Gleanings in Bee-Culture, and a strong plea is made in favor of putting up honey in this form; that is, in the granulated condition in paper. Small cost is of course one chief argument, the paper bags costing about one-tenth as much as tin lard-pails. The other principal argument is the matter of convenience. A penknife runs two or three slits in the paper, and then the paper is easily pealed off, leaving the lump of granulated honey on the plate like a brick of butter. Then a slice can be taken and used just as a slice of butter, and from this can be taken individual portions just as with butter, the individual being able easily to take what he wants and to put it just where he wants it, without the trouble of having the honey stringing and daubing where it is not wanted.

With a certain class there is likely a future for honey put up in this style, and if there is, the credit for it should be given to Mr. Aikin.

◆

Time to Cut Alfalfa.—Some anxiety on the part of bee-keepers has been felt because there was a fear that it would become the general practice to cut alfalfa in first bloom, giving little opportunity for bees to work upon it. This anxiety was by no means allayed by the fact that experiments at the Kansas experiment station seemed to favor early cutting. Not, however, the experiment station of Colorado, a State *par excellence* an alfalfa State, makes a very different decision. Bringing the question down to the very practical form, "At what stage should alfalfa be cut to get the greatest feeding value *per acre?*" the reply is, that when cut in full bloom an acre will produce 11 percent more beef than when cut in first bloom, and 58 percent more than when cut in half bloom. The following is from the report:

> If we cut enough alfalfa in bud to make 100 pounds of hay, the same alfalfa would make 126 pounds if allowed to stand till in half bloom, and 145 pounds if allowed to stand till in full bloom. If allowed to stand longer it would decrease. If the question were, "When shall we cut alfalfa in order to make the most hay?" the answer would be, "When it is in full bloom." The question as presented to us is, "When is the *best time* to cut alfalfa?" This time is evidently that at which we shall have, not the largest yield of hay, nor of the best quality, but the largest yield of digestible food ingredients. This answer considers two factors—composition and digestibility. Every feeder will mentally add, "But there are other things to be considered," which is true, but it is assumed that the animals will eat the hay of which we are writing, and will relish it.
>
> We have given the amounts of hay which the same quantity of alfalfa would give when in bud, in half bloom, and in full bloom, using the figures obtained for our Colorado alfalfa. The 100 pounds of early-cut hay will contain 15 pounds of albuminoids and 1.5 pounds of amids; the 126 pounds of hay, alfalfa cut in half bloom, will contain 15.8 pounds of albuminoids and 2.9 pounds of amids; the 145 pounds of hay cut in full bloom will contain 19 pounds of albuminoids and 2 pounds of amids. Leaving the value of the amids out of the question, for they are assumed to have only a small value as compared with albuminoids, and reducing these figures to the basis of a pound, we find the relative values to be 1.16 for the early cutting, 1.00 for that cut in half bloom, and 1 08 for that cut in full bloom. Or, stated otherwise, 86.2 pounds of alfalfa hay cut in bud, or 92.6 pounds cut in full bloom are equal in value, using the aluminoids as the criterion, to 100 pounds of alfalfa hay cut in half bloom, so that alfalfa hay cut in half bloom is inferior to that cut in bud. In this statement we assume that the albuminoids are equally digestible at the three different stages of development here specified. If this be true, the largest amount of digestible proteids would be obtained by cutting in full bloom; for while the relative values of the hay cut in bud to that cut in full bloom is as 100 to 107, the yield is about 100 to 145, leaving an advantage of 38 pounds of hay on each 145 pounds of hay cut in full bloom. These figures refer to the first cutting.......
>
> The feeding experiments are decidedly in favor of the early cutting, calculating the value on pound for pound of hay produced. But if we calculate its value in terms of beef produced per acre, we come to the same conclusion at which we arrived from the consideration of its chemical composition and the relative crops produced at the respective periods. Mr. Mills summarized the results of his three seasons' feeding as follows: That to produce one pound of gain, beef, it requires 18.21 pounds of hay of the early cut; 33 44 pounds of the medium cut (page 11, Bulletin 44). But we have seen that the relative quantities of the early, medium, and late cut are 100, 126, and 145. Accordingly we would obtain for the values of the respective cuts in terms of beef, 5.4 pounds for the early, 3.8 pounds for the medium, and 6.0 for the late cut. We would, therefore, answer the question in so far as it pertains to the first cutting, that the best time to cut

alfalfa is at the period of full bloom, for at this period we not only get the largest amount of hay, but also the largest return in pounds of beef per acre.

The results of feeding experiments with the second cutting leads to the conclusion that the best time to cut this crop is what Mr. Mills designated his medium cut.

I conclude ,that, after allowing for a little latitude in the use of the terms "half bloom," "full bloom," late bloom," etc., the time to cut alfalfa in order to get the greatest value per acre is at the period of full bloom, and that there is a period of about a week during which its value is essentially constant.

Weekly Budget.

E. E. Hasty, of Lucas Co., Ohio—our "Afterthoughter"—wrote as follows, March 25th:

> "The cold snap of three weeks agone didn't seem to do much harm. Perhaps yesterday's gale with thermometer near freezing will do more—more brood started now."

◆

Mr. T. F. Bingham, of Clare Co., Mich.—the popular Bingham smoker man—wrote us March 26:

> "The weather is bright and frosty this morning. All colonies came out alive from the cellar, in time to be caught in a cold snap. It will be a good test on early exit from ventilated cellar, should enough live through in my thin hives."

◆

Somnambulist and F. L. Thompson.—Somnambulist seems to view with some little trepidation the seating of F. L. Thompson upon the editorial tripod in the office of the Progressive Bee-Keeper, saying:

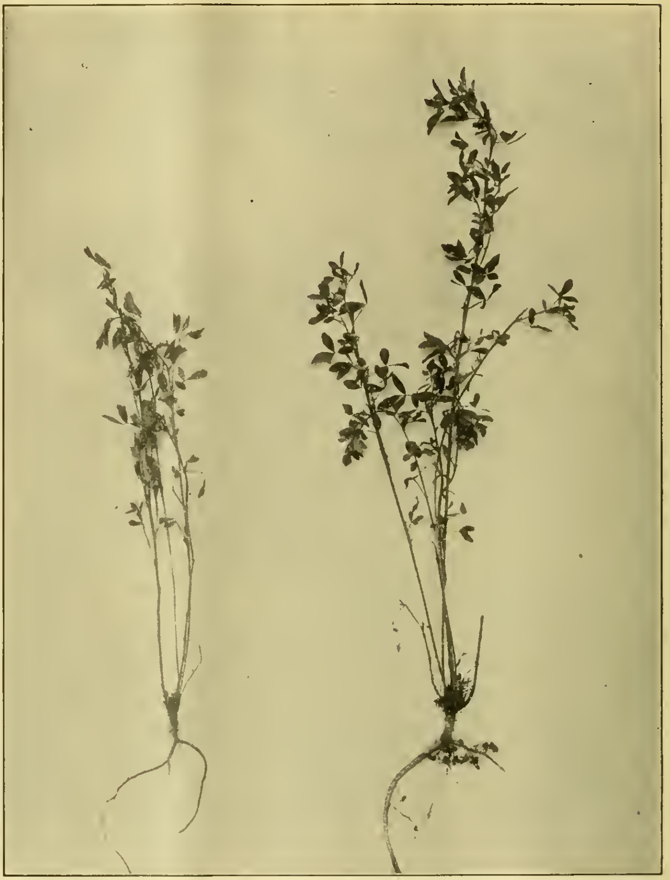
> F. L. Thompson takes a position on the editorial staff, and, oh! my! won't we all have to toe the mark, and at the same time keep up a succession of dodgings to escape getting our ears boxed? I've my head to one side now in anticipation of a slap, because I feel like favorably commenting on his January contribution.

◆

Your Subscription to the American Bee Journal—how about it? Is it paid in advance? If not, why not attend to it at once? We doubt if there is a single reader that begrudges the small sum of one dollar for a year's subscription to this journal. Naturally, we believe it is the biggest and *best* dollar's worth of bee-literature that is produced to-day. Certainly, one dollar is a small sum for 52 copies, or over 800 pages, of the Bee Journal.

When sending your own renewal subscription, why not send in some new ones and get some of the premiums we offer for so doing? See page 210.

◆



Courtesy Illinois Experiment Station.

Alfalfa Plants, Showing an Uninoculated Plant on the Left, and an Inoculated Plant, with Root Tubercles and Increased Growth, on the Right.—(See page 215.)

The New General Manager of the National Bee-Keepers' Association, Mr. N. E. France, is the best-known bee-keeper in Wisconsin. He is also Inspector of Apiaries for that great State. His predecessor in the General Manager's office, Eugene Secor, turned over to him the snug sum of $921.60, and reported about 1000 members. But the membership should be doubled this year. We wish that every reader of the American Bee Journal were a member. This alone would put an additional sum of money in the treasury that could be spent in the interest of bee-keeping in a way that would tell for years to come. There is much important work that could be done, provided the financial means were provided therefor.

Reader, if you are not already a member of the National Association, why not join at once? If you prefer, or if it is more convenient, you can send your dollar to this office, as we are the Secretary of the Association for this year. We will forward your dues to the General Manager, who will send you a receipt.

We have received quite a number of membership dollars recently, and would be glad to take care of a lot more.

◆

Dadant & Son, of Hancock Co., Ill., as most of our readers know, are successors to the old and honored firm of Chas. Dadant & Son. They are makers of comb foundation, and their reputation for making a good article has increased with the years. A large lot of comb foundation, shipped by them to their French correspondent at Paris, was unexpectedly stopped at the French custom-house at Havre, and ordered examined for traces of adulteration by the French Revenue officers. The Government Chemists at Rouen, to whom samples were sent for analysis, promptly reported the foundation to be made of *absolutely pure beeswax*.

But this verdict will be no surprise to their American friends, for they all know, and have known for over a quarter of a century, that the name "Dadant," in connection with comb foundation, is a synonym for honest as well as superior goods.

◆

Paste for Labels.—In making paste for labels on tin, I use equal parts of hot water and honey, and dissolve enough corn-starch to make a thick paste. This works perfectly. —H. C. Ahlers, in Gleanings in Bee-Culture.

Convention Proceedings.

Chicago-Northwestern Convention.

Report of the Chicago-Northwestern Bee-Keepers' Convention, held in Chicago, Dec. 3 and 4, 1902.

BY OUR OWN SHORTHAND REPORTER.

(Continued from page 197.)

THE USE OF CHAFF-HIVES.

Pres. York—You can ask any question you would like to hear discussed, and we will have the slips gathered up pretty soon, so we will have questions on hand all the time. There is one slip here with simply "chaff-hive" on it. I don't know what the questioner wants to ask. How many are now using chaff-hives?

Eight held up their hands.

Pres. York—I suppose all the rest do not use them. What advantage is there over the non-chaff single-walled hives?

Mr. Whitney—This question of hive is like many others a question of locality. I always used chaff-hives until I sold out my bees last spring, and now I have an old-style hive I wish I was rid of. I like the chaff-hive. A double-wall hive, the second story a single shell with an outside case that is sufficiently high to contain two or three sections. I find that the best hive that I have ever seen. I think I can produce more honey with such a hive as that than any other. The bees in the double-wall hive, such as I described, however strong they may be, will gather around the section-cases. I scarcely ever have any hanging out when I use that kind of a hive. I know it isn't popular with most people, but give me the chaff-hive of the kind I describe over any other kind I ever had.

Pres. York—Let me ask Mr. Root or Mr. Leahy about the demand for chaff-hives. I could answer for this point, but perhaps it would be better for the manufacturers to answer that.

Mr. Root—I wouldn't be able to answer.

Pres. York—Mr. Leahy, how is it about the chaff-hive down in Missouri?

Mr. Leahy—I used to be a believer in the chaff-hives. I used to think that I got brood earlier in the spring, and I believe I did, but later on, when the warm seasons came, the bees didn't develop as fast then as they did in the single-walled hives. Cellar-wintering I believe in. I have disposed of all my chaff-hives—gave them away.

Mr. Whitney—I am aware, as I said before, that the chaff-hive is not a popular one. One great reason I think is, it is an expensive hive, costs twice as much as any other hive that I have ever seen; but, as Mr. Leahy says, I think they do develop brood more rapidly in the spring, and by the time fruit-bloom is on, especially in this locality, you will have a very strong colony of bees. I have always had. I disposed of my bees last spring down at Kankakee, looked them over in April, and my friends said, "What strong colonies of bees you have." I said. "I always have; I wouldn't have any other; and they are always ready as soon as there is any honey to get." During the hot season the double-wall hive, I think, protects the bees from the extreme heat of the sun. I can set them right out without any shade, and during the early spring, when a single-wall hive, it seems to me, would be affected by the extreme heat and cold, the double-wall hive maintains a medium temperature like a refrigerator, for instance; there isn't the variation that there is in a single-wall hive. I think the bees are carefully protected in such a hive. I know that I produce so much more honey than my neighbors that they wonder why. I told them that I thought it was partly the kind of hive I used, and perhaps because I gave them more attention than some others, and get twice the amount of honey that other people get.

Mr. Wilcox—Did you try any without chaff in the same apiary?

Mr. Whitney—Not here, but in Ohio I did. I have always had better success with the chaff-hive, that's why my experience in that matter has determined me in favor of that hive. I never think of protecting my bees in this locality except by putting cushions on top of the hive. I have never lost a colony from freezing.

Mr. Niver—In central New York everybody uses chaff-hives. In Wisconsin they can't use them at all. I think it is altogether a matter of locality. In Wisconsin they must winter them in a cellar. A chaff-hive in a cellar is a nuisance. We, in New York, can't winter outside without the chaff-hive, and we can not successfully get our bees in the spring ready for business without the chaff-hive. We can winter outside, everybody in our locality (in Tompkins Co., N. Y., which is the greatest county for bees), they all winter in chaff-hives, and using them that way and in that locality it is correct. There are a great many things besides wintering. In our apiaries we have no robbing. There is four inches of space for them to get in. No loose cracks, and then the sun can't warm them up so they will fly out when they don't want to. We never want the sun to warm them up. If it is warm enough they will swarm there. It will be mostly a matter of locality. Each one must study his locality.

Mr. Abbott—I had a big experience with hives when I first went to Missouri. I bought and sold the best. I ran an apiary of about 200 colonies. The result was I had a chaff-hive—a Jerseyville hive. It had a place for packing around over the brood-chamber 6 or 8 inches. I had these in my apiary, quite a number of them, because that was the only hive that was sold and pushed when I went there; and among them I had a number of hives that were ⅜ of an inch thick, and one inch, and I was a great believer in the chaff-hive; although I had kept bees in Tioga Co., N. Y., I never had thought of a chaff-hive, and I don't know it yet that bees will freeze. I never thought anything about it until that winter. The first colony that swarmed, and the colony that stored the most honey, was in a ⅜ hive, no protection at all, right out-doors in Missouri where it gets 28 degrees below. That made me look the matter up, and I watched it for several years, and I discovered that the first bees that swarmed were always in these thin-walled hives, and the bees in Jerseyville hives didn't swarm as quickly as the others, and they didn't give me any more honey. I haven't any use for chaff-hives in Missouri. Possibly in Wisconsin I might have to use them. I wondered why it was. I don't know, only the bees warmed up quicker and began to breed sooner, and a number of those hives were protected by putting store-boxes over them, and then they were taken off early in the spring. I think the thin-wall hives, protected that way, were the best, and responded quicker than any I know, and I was buying and selling the best for eight or ten years that way. I thought these hives were of no account, but that was the result. Of course, I wouldn't advise anybody to use that kind of a hive.

Mr. Kluck—I have always been using 8 or 10 frame hives, also a large chaff-hive, and I find the chaff-hive produces from one-half to two-thirds more honey than the 8 or 10 frame hive does; and at the same time it is more safe in wintering bees in the chaff-hive than in the 8 or 10 frame single-wall.

Dr. Miller—How many frames?

Mr. Kluck—Ten frames in the lower story.

Dr. Miller—That is the same size frames as your others.

Mr. Kluck—Yes, sir; and another thing in support of them, in the spring you can breed the bees handier, and also it keeps them from swarming.

Mr. Fluegge—Take a single-wall hive, winter in a good cellar, and protected by wall-paper on the outside and an air-space between, would you not favor greatly the chaff-hive for spring protection and rearing brood?

Mr. Niver—Is that something in the same line as a house-apiary? Do you mean to have them above ground?

Mr. Fluegge—I mean in a good cellar without the protection in winter, and in the spring when you put them out protect them; not leave outside in the winter, partly beneath ground, in a house-cellar, and there is very changeable weather in the spring when you put them out.

Mr. Niver—If it is a house-apiary he is wintering in, in our locality we wouldn't recommend it. I lost 90 percent in that kind of an arrangement for two years.

Mr. Chapman—If you will try common, ordinary tarfelt, make a wrapping of it and tack a lath on where you join it, you will find that as good a spring protection as anything you can get, after taking them out of the cellar.

Mr. Wilcox—As for protection I think it may be a little hot excepting the few cold days that will come on during the first month, and I find a better method, and that is to place them where they will have the sun in the forenoon and no wind, if I can find such a place conveniently near. They will breed out nicely protected from the wind and exposed to the sun, and I don't think if you can give them that, that it is advisable to go to the extent of further protection.

Mr. Fluegge—I think having only six colonies of bees as I have, it would be pretty hard to get wind-protection from four sides. I think it would be easier to protect the hives partly.

Mr. Wilcox—I never knew an east or south wind to do any harm.

Mr. Fluegge—I think a southeast wind, or a directly east wind, coming over Lake Michigan, does harm to our bees in the spring.

Mr. Wilcox—If you were 200 miles from the lake it wouldn't do them much harm.

Pres. York—I have a slip of paper which reads: "Speaking of wild bees, if the person who asked if there are any such bees, will call at 68th and Morgan streets, Chicago, next summer, he will never doubt that there are wild bees there!"

(Continued next week.)

Contributed Articles.

Mouse-Proof Honey-Hou —Poor Honey Crops—Co-operation.

BY F. GREINER.

THE following is a sort of confidential letter intended for publication:

"On page 729 I read: 'After sections are cleaned out pile up in honey-room and cover up mouse-tight.'"

This practically admits that the honey-house of the writer, Miss Emma Wilson, harbors mice. I wonder how many readers of the American Bee Journal put up with such conditions. are pestered with mice in their honey-rooms. If there is any thing objectionable in a honey-house or workshop of a bee-keeper it is *mice*. They will soil our sections, destroy combs, frames, separators, quilts, cushions, etc. Why tolerate the nuisance? A honey-house must be bee-proof, anyhow, at least bee-keepers (except the Coggshalls) think so. If it is bee-proof, is it not mouse-proof? If it is not, it can and should be made so. I have never had any damage done by mice in my honey-house and workshop combined. They simply cannot get in, that's all!

Still, I believe in keeping all supers, empty or full, covered to keep out dust, spiders, flies, etc. All filled or honey-containing supers or hive-bodies are kept covered with bee-escape boards, not only to prevent the above-named things from making our honey unsightly, but to make a sure thing still surer—to make it impossible for bees ever to find it. I have had some sad experiences in this line. Once I left a window open when going to dinner. On my return the bees were in possession of the building, and bushels of them were collected and clustered at the windows. By nailing blankets over the windows from the outside, except over one, and by other tactics, I finally became master of the situation.

At another occasion the bees had entered a lot of stacked-up supers through a crack in the floor of an upstairs room, said room having been fitted up in a loosely built carriage-house temporarily for my use. A great deal of damage had been done in this second instance, the bees having had a long time to put in their work. On being sent for, and arriving late in the afternoon, I had hard work to clean out the bees and restore order. I learned a lesson that I will never forget: To stack my supers upon regular hive-bottoms, close the entrance with blocks and cover up bee-tight.

REPORTS OF THE HONEY CROP.

Mrs. E. Burdick, from New Mexico, says on page 730: "Bees have not done anything—only one full super per colony." A full super does not count anything with Mrs. Burdick. It would with me, as I will show further on.

I recollect another bee-keeper from the South reporting about a year ago: "Had a poor season; averaged but 16 gallons per colony. A year ago my average was 22 gallons."

Mr. Doolittle, if I mistake not, has told of harvesting 120 or 130 pounds of comb honey per colony in a *poor* honey season. Many others have made similar reports during the year, or years, past. When reading them I am at a loss to know what a poor or a good season is. It seems to me that as long as bees can gather enough for their winter supply, the season must be called a normal one. Dr. Miller, when he had to feed a ton or more of sugar had reason and might talk about a poor honey season. When the season is such as to enable one to take any surplus, it must be called favorable; and when the average runs up as high as 50 or more pounds it has been an exceptionally good one. A surplus yield of 400 or 600 pounds goes beyond my comprehension, and I find no term to express it.

All bee-keepers may not look upon this matter as I do. For the sake of clearing this thing up let us take the first case of Mrs. Burdick and see what it means. Her bees had done nothing, only filled one super. If the super contained 24 sections, and the honey was either clover or basswood, it would have bought, judiciously sold, not less than $3.50. With no other work on hand one might attend to 300 colonies in 3 yards without other help. The income from the honey sold would present the neat sum of over $1,000. The number of colonies have probably been increased also, and some may be turned into money. We will not count that, nor what may be obtained by selling wax. An income of a $1,000 in a poor season is not very bad. Let them come. I have lived well with smaller yields.

The second case—the 16-gallons average—means more than 150 pounds of surplus per colony. For good table honey, in glass, I obtained this year 10 cents net. I might not have been able to sell many tons at that price. Let us put it down to 7 cents. At this low price each colony would have turned out the owner $10.50, or 200 colonies would have given an income of $2,100. This does not look to me like a bad thing in a poor season. I can't help wondering how much some people engaged in bee-culture expect to make, or what would satisfy them.

In a paper read at the Bee-Keepers' Convention in Buffalo, Mr. P. H. Elwood said, "The bee-keepers are poor." It cannot be possible that they are, with such honey-yields. The bee-business would be like a veritable gold-mine, as compared with farming, if in poor seasons such yields were being secured. If it is true that they are poor, then bee-keepers do not get the large yields they report.

The point I wish to make is, that things are often not called by the right name. The bee-keeper need not flatter himself, and tell about it, how much better he can manage than his neighbor. Other up-to-date men would do equally as well as he, *in a poor season*, with the same chance.

CO-OPERATION AMONG BEE-KEEPERS.

For the purpose of disposing of their honey, this seems to be uppermost in the minds of many, as gleaned from numerous articles in different bee-periodicals. Perhaps a move of this kind is all right, and may result in good, as regards the producer, if successful. From my own standpoint, with conditions as they surround me, I see no need of it whatever. I try to produce what is wanted, and sell it for what I can get for it. Producers of other articles of food are situated precisely as I am, and do as I do. If by co-operation we aim to distribute our product evenly, the general public would be benefited; but if our aim is to control prices, keeping them up or raising them, the move will be decidedly wrong. Many writers are of the opinion that honey is low, or too low, in price. They dwell upon the subject. It is my opinion that honey is sold at a higher price, comparatively, than other things—too high to encourage and increase consumption. Twenty-five years ago honey sold for not materially more, although a very fancy lace-trimed lot brought me, f. o. b. here, 15 and 16 cents. At this price the bulk honey sold in New York (on commission) in 1876. In 1886 it sold in Philadelphia at 14 cents. Since then prices ranged between 12 and 15 cents, according to the supply and demand.

The farmers' wheat, 25 years ago, brought here $1.50 per bushel. He did no better at that time than he does now with 75 cents per bushel. The farmers' income has been reduced to one-half, while the bee-keepers' income has almost held its own, during the same period. He ought to do well.

The greatest obstacles to co-operation are to get the bee-keepers *to co-operate*; and lack of available capital.

Ontario Co., N. Y.

The Premiums offered this week are well worth working for. Look at them.

Importance of Bacteria to Alfalfa.

BY J. E. JOHNSON.

FIRST, what are alfalfa bacteria? They are not bugs of the masculine gender, as Mr. Hasty seems to infer, on page 824, but are little flowerless plants which feed upon the roots of alfalfa, and gather nitrogen from the air, and fix it in the plant alfalfa. They are so small, says Prof. C. G. Hopkins, of the Illinois Agricultural College and Experiment Station, that one little tubercle the size of a pinhead may contain a million of these bacteria. As to their originating without inoculation, I believe it is considered impossible, or at least not probable, but all alfalfa seed probably contain bacteria in the dust along with the seed, and may contain some tubercles; but as alfalfa seed is generally pretty clean, the inoculation would be slight. Probably several years would elapse before the field would be thoroughly inoculated, and much of the alfalfa would suffer for want of available nitrogen, and be considered a failure and plowed up. In the west where land is cheaper in price, and the people more inclined to give it a chance, owing to non-success with other forage-plants, the same fields were re-seeded or let stand until the little plants called bacteria multiplied and filled the soil with countless numbers, and the alfalfa would then flourish and "the woodchuck would be theirs."

The different clovers must also have bacteria in order to be grown successfully, but Prof. Hopkins says they are of a different species, and that clover bacteria will not aid alfalfa. Neither will the cow-pea bacteria aid soja-beans. All have their own kind.

Now let me say that 14 years ago I was in the West (southern Kansas), and the farmers all claimed that clover would not grow there, but by persistent efforts they have finally succeeded, and now grow fine clover, and no doubt the clover bacteria along with the seed continued to multiply until the soil is now thoroughly inoculated. Even now many in Oklahoma say clover will not do there; but if they will get say 100 pounds of soil from an Eastern clover-field, in many now considered unfavorable localities clover may do well.

Prof. Hopkins says that the alfalfa bacteria have been found in a few places in Illinois, and wherever a field of alfalfa was found to have these tubercles the alfalfa did well, but where they were not present it was a failure. He advises farmers to sow alfalfa on hilly land or bottom land, or on almost any soil except wet, low ground where water will stand. Alfalfa grown on infected soil will do well almost anywhere in the United States; where so grown, it will yield 3 or 4 cuttings in Southern Illinois. Now as one little tubercle will contain as high as 1,000,000 of these bacteria, and one alfalfa plant will have 100 or more tubercles on its roots, or 100,000,000 of these bacteria or microscopic plants to aid it to be a flourishing alfalfa plant, can we justly expect it to yield honey when grown without these bacteria? They are a part of the plant, and the alfalfa is not complete without them.

Prof. Hopkins writes to me that he is told alfalfa does yield honey in Illinois, but as in his experiments the alfalfa is cut before it has a chance to bloom but very little (he advises early cutting), he has not been able to tell much about the honey part of it. Possibly he did not even think about that part of it, but I shall ask him, in behalf of the bee-keepers of Illinois, to test the matter this season.

In Dupage Co., Ill., 21 tons of alfalfa hay was cut in one season on two acres, or 10½ tons per acre, and that in 1901. You all know that was a dry season in Illinois. Now with such crops of hay as that, you may be sure the farmers will soon embrace alfalfa culture, and when it is grown properly, and not until then, can we expect it to yield honey.

It was through the enthusiastic efforts of Prof. Hopkins that this matter has been fully tested, and we feel justly proud of such men. The Illinois Experiment Station has done much valuable work. Their bulletins are free. Get them, and read them, especially Nos. 76 and 80; they are all good.

I think I am justified in saying that alfalfa properly grown in Illinois will yield honey just as well as it does in the West, where it yields with or without irrigation.

In conclusion, if we succeed in getting alfalfa successfully raised for both hay and pasture in the East, will the farmers cut their hay too early to let it yield honey? No. There are many cattle-feeders in this vicinity, and they will not cut even their clover until the heads turn brown, nor their timothy until it begins to ripen, as they all agree that when so fed in connection with corn it gives much better results than when cut green; and so it is for horses that work on the farm, or used as drivers on the roads, or in fact anything except dairy cows. Here we raise corn and oats, and with the ever-pressing work of plowing corn and harvesting and threshing, alfalfa would have to wait.

I think alfalfa will play a very important part in the future, both as to forage and honey in Illinois.

Prof. Hopkins, of the Experiment Station at Urbana, Ill., has agreed to furnish me with as much infected soil as I want, at 50 cents per 100 pound, which he says is for the expense of handling, drying and racking. He says that in a thoroughly inoculated alfalfa field nearly every particle of dust would contain these germs, so you may see that 100 pounds would soon inoculate an acre; then that acre could be the means of inoculating the soil of a whole neighborhood. I think he is making efforts to supply all who wish with infected soil, at least all who live in Illinois, and maybe others, I don't know.

In three separate tests at the Experiment Station with inoculated and uninoculated soil, the average of nitrogen gatered by the bacteria, and fixed in the plants, alfalfa was grown at the rate of $5.25 per acre. The weight of free nitrogen in the atmosphere is equal to about 12 pounds each square inch of the earth's surface, so the supply is inexhaustible, and so may enrich our land from the air instead of hauling manure. However, the ground should be pretty rich to begin with, and the application of lime to the soil is beneficial, especially to upland. Knox Co., Ill.

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Joining the National—Other Matters.

BY J. M. YOUNG.

DO you belong to the National Bee-Keepers' Association? and have you paid your dues? If you don't belong you can't be an up-to-date bee-keeper. The Association needs your dollar, anyhow, and you might need some help from it. If nothing more, I would belong to get all the proceedings and reports that come up from time to time. By all means you should be a member to ask your neighbor to join with you. It is a dollar well spent, and you will not miss it.

USE OF BEE-VEILS AND BEE-SMOKERS.

Bee-veils are a good thing in their place, and are all right to have around when visitors are looking at the bees, but to see a bee-keeper wear one makes me feel as if he was not a good, genuine bee-keeper, and is afraid of bees. I seldom have one on, only in extreme cases, but I always have a lighted smoker and use smoke plentifully. I have had as cross bees as they generally get, and have had as many as 100 colonies in one apiary. I seldom open a hive unless I have a smoker, all in good trim (although it is not needed at all times) sitting close by in case of an attack.

GETTING KNOWN IN THE BEE-KEEPING WORLD.

Does everybody know you around home? and are you generally known among the editors of the different bee-papers as a bee-keeper, and that you have been in the business? If not, you would better get your name out among the bee-keeping fraternity in some way or other. It is a good idea, if you have anything to sell, and to make bee-keeping a success financially, a person must be generally known throughout the country. This can be done by judicious advertising through the leading bee-papers, telling them what you know, and what you don't know, through the press.

GET A RUBBER STAMP WITH NAME AND ADDRESS.

Every bee-keeper should have a small stamp, then stamp all his stationery and everything he sends out by mail. On every bit of matter sent through the mail put your name and address, for it will save your customers, and people who do business with you, a world of trouble. Again, it prevents mistakes in many instances. I put my name and address on every section I use on the hives, or that the honey is built in, and I also use it on every box I send out by express or freight; the latter stamp, of course, must be a larger one, for shipping by freight or express.

SLOPING BOTTOM-BOARDS.

I like sloping bottom-boards. Years ago, when I first began bee-keeping I used the American hive, made by H. A. King & Co. They were made, (as the old bee-keepers will remember) with the sloping bottoms. I liked the idea then, and always found them to be a big advantage over the flat bottoms, especially in early spring; in cleaning-out time, all the dead bees were a great deal easier taken out, and the water that was caused by the bees had a good chance to run off.

During the present winter I am working on this same idea, that of sloping bottoms and a hive-cover combined by simply reversing, and having the top and bottom one and the same thing. In fact, the model that I am working on is a part of the up-to-date bottom-boards, with the same old idea of sloping of 30 years ago brought back into use again. I will test it in my own apiary one season before I say anything about it, and see how I like them. I don't suppose it will keep out the moths, or keep the bees from swarming; but just wait and see. Cass Co., Nebr.

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

Mrs. Griffith's Bee-Dress.

I promised the sisters I would tell them how I dressed when I commenced to keep bees, and the way I dress now.

I made bloomers with a rubber at the ankles, and a loose sacque with a belt to button around the waist, and rubber at the wrists; kid gloves, and a hat with mosquito-netting around it. I soon found that all that rig was too much trouble to put on, and too warm, so I dropped a piece at a time until I left off all but the hat.

Now I use only the hat, and not always that. When a swarm comes out, if they settle low, I put the hive under them and shake them in, and let them be for a little while. I pin my sleeves at the wrist, to keep the bees from getting up my sleeves, and put on my hat; that is all the preparation I make when I am going to do anything with the bees. I do not have anything on my hands, as I like to have them bare. Let me be working with the bees, or pulling weeds, or anything else, I like them bare, as I do not mind the looks of my hands, and I can work the best with them bare. I seldom get stung, and if I do, I don't mind their sting as the bite of the Jersey mosquito; they hurt me more than the bee-sting. SARAH J. GRIFFITH.

Cumberland Co., N. J.

A Whole Bee-Keeping Family.

MISS WILSON:—I always enjoy the writings of "Our Bee-Keeping Sisters," and since this department has been started, the American Bee Journal has become doubly interesting. I have often wondered how much interest was really taken by bee-keepers' *wives* in their *husbands'* business.

I regret to note that those sisters who write seem to be "paddling their own canoe," and there is no husband connected with the business. Now, please record that here is one sister who is trying to be a "helpmeet" to her husband, especially in the busy season of the year. For eight months our four children are in school, therefore at that season we do not have much time for bee-work, neither is there a necessity for a great rush in the bee-yards. Yet, on Saturdays we make and wire frames, paint hives, put together nucleus shipping-boxes, etc., and always manage to find something we can do profitably that might have to go undone later.

I must say it is a pleasure to spread the paint on nice, clean, new hives, and I have painted a hundred in one day, and manage, by the help of the girls, to keep up our housework, too. With 500 colonies of bees in seven yards, from 4 to 20 miles out, there is hustling when the honey-flow begins until ready to be taken from the hives.

In this delightful climate camp life among the hills is delightful, with a wagon loaded with extracting and camping outfit, plenty of "grub," tents, bedding, etc., the wagon going ahead, we follow in the carriage. Best of all we have a negro cook who tends the team, helps about the heavy lifting, and does the odd jobs, and is much appreciated.

We usually reach the yard next to be worked in the afternoon. Tents erected, supper prepared and over, we spread our beds for the night, and early next morning we are ready for business. Husband and our oldest son, Huber, age 16, will remove the honey from the hives and bring it to the extracting tent, while myself, and Alice, 14, and Kate, 12, will extract the honey and cut out the nice, white combs and pack in screw-cap cans ready for the market. Some of you Northern section-honey-producing sisters may laugh at this bulk-comb-honey product, but, believe me, we can not nearly supply the demand, and it nets us nearly as much per pound as section honey; then we have the advantage of filling in around the comb with extracted honey.

Are we afraid of stings? Yes, some—and stray bees brought into the extracting tent sometimes annoy, by crawling around too familiarly.

Our girls insist that it is more cleanly and comfortable to wear boys' overalls while working in the extracting house, hence they have their papa to buy them large, roomy overalls, which are drawn on over their clothing. Of course, visitors are not expected.

We have never kept a record of a whole day's work, but I think myself and two girls can extract, cut out, and pack, a ton of this bulk-comb honey in one day, with sufficient help to do the lifting.

I, for one, would like to hear from the *wives* of bee-keepers. MRS. W. H. LAWS.

Bee Co., Tex.

Mrs. Laws' letter will be read with interest by all the sisters, wives included. She is right, we ought to hear more from the wives. I am sure we would be glad to.

How pleasant it must be to have all the family interested, and have some part in the work. I know something about how nice it is, for at one time our whole family worked with the bees.

Your visits, Mrs. Laws, to the out-apiaries must be delightful—reads like a pleasant summer excursion. You enjoy all the pleasures of camp life (negro cook included), with the profits thrown in.

Tell those girls for me that I think they are very sensible in their choice of dress.

✻ The Afterthought. ✻

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, O.

CALIFORNIA AS A HONEY-STATE.

Glad to see B. S. K. Bennett, of California, stand up for his State. Guess he's right, too. California lost the lead to Texas by being caught in a bad year. Probably a good many of us will continue to think of California as the leading State in honey. Page 94.

MOVING BEES WITH OPEN HIVE-ENTRANCES.

Yes, Mr. Hyde, to try to move a lot of bees with entrances open and fail at it—that's a thing we can shudder at even without having experienced it. Page 99.

HOW THEY "DO" FRANCE.

The old and worn proverb, "They do things better in France," seems to have got juggled a little, and behold it it is, They *do* France, to teach him better things, in Wisconsin. Pretty much everywhere exact red-tape is mighty; and saving half the expense oft counts little or nothing, a crime. Political millennium not here yet. Page 101.

THE AVERAGE PER COLONY.

The Northwestern didn't seem to get up much of a fight over the question how to count averages. Here is a man who has 100 colonies. Half of them die in winter. Forty of the remaining 50 came through "powerful weak," and don't get on their feet till harvest is past. Harvest is good, and the 10 good ones store lots of honey. The 40 he calls "nuclei;" and so is enabled to say, "My average was about 100 pounds." Shall we tolerate this? or shall we smite him, and tell him his average was only 20 pounds? Page 102.

THE HONEY EXCHANGE AND ITS WORKINGS.

Oranges and lemons are luxuries, but somehow the people *will have them.* Honey is a luxury—and most people consent to go without very easily, if the article is not handy. This queer and ugly fact should be figured on in deciding as to the possibility of a Honey Exchange. Also, this related fact that higher prices are not nearly so much needed as the cultivation of the market clear from the bottom. Doubts whether the proposed Exchange will cultivate or do the opposite thing. A stream is not expected to rise higher than its fountain; and an organization formed of those who extract their honey before it is *really* ripe will hardly refuse to handle unripe honey. Page 103.

BEE-KEEPING IN GERMANY.

It is news that T. A. Heberly tells us about German bee-keeping—that bees are not set abroad there, but kept in bee-houses. Of course, he is correct, in part at least. We have in time past heard much of migratory bee-keeping in Germany. We can hardly infer that they pick up and migrate house and all. Possibly Germany may be a big place—so big that they have "locality" there. Page 104.

WINTERING BEES UNDER EARTH.

B. F. Schmidt says he winters bees under ground; but when we read more fully it appears that he puts the ground over the bees instead of the bees under the ground—piles tough, nicely cut sod around to make each hive a sort of Esquimaux hut. This seems to be a novelty. Where winters are not inclined to be wet, and tough sod is handy, I guess it's a promising way—that is, for those who are devoted to their bees and have but few. He makes plain dirt do for part way up at the bottom of the hut. Page 108.

FOUL BROOD AND HICKORY SMOKE.

Some of us incline to think that the foul brood which is cured by hickory smoke can not be a very foul kind. "Save your bacon" some other way—or rather, save your bacon that way, and your bees some other way. Page 109.

STATE OF WASHINGTON A BIG STATE.

And so Washington (State) is a big place also; and the east end of it can file a claim to the effect that usually it gets no more rain than is needed. We hear. How exceedingly easy it is for the most of us to use language which reaches much farther than our observations reach. Page 110.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

Taking Good Care of the Brood.

It is an easy thing to be careless in giving advice, and not the easiest thing, even when one desires to be careful, always to advise in such a careful way that no inexperienced person shall thereby be led into error. Some words of mine, on page 139, calls forth the following from Delos Wood:

"You say to pile brood over a *weak* colony 4, 5, or 6 stories high. Now, Doctor, you certainly, with 40 years' experience, ought to know it would take a rousing big colony to care for 6 stories of brood above their own, and even with a strong force many eggs and young larvæ would perish. Tell 'Ohio,' if he shakes all the bees off, to put the combs over a *strong* colony and make it a *boomer*. Or shake off most of the bees and let the old and new hive be side by side, or the old one just behind the new one for a few days, till the bees get well started in the new hive; then destroy queen-cells and put the old hive on top of the new with excluder between. This does away with the swarming-fever, prevents increase, and keeps the colonies strong.

"In this locality it won't do to put brood over the shaken swarm until they have begun to build comb and the queen commences to lay. If you do, the bees go to the brood and build cells, and leave the queen to die.

"Don't strengthen a weak colony from a strong one in the spring. Make the weak one to help the strong one by giving brood from it to the strong one. Then after the main honey-flow the weak one may be allowed to build up strong for winter, or helped if need be from the strong ones."

If my advice should lead any one to pile six stories filled with brood above a weak colony all "at one fell swoop," it would surely be a rather serious thing, so I am much obliged to Mr. Wood for calling attention to the matter. I have been in the habit for years of piling up brood over weak colonies, giving first a single story, then adding other stories a day or more later, and when giving the advice I failed to think of that point. I'm afraid I'll never learn to be as careful as I ought to be in such things.

Mr. Wood understands my advice one story worse than it really is, for I spoke of piling up till the whole pile was 5 or 6 stories high, *including* the story the weak colony already occupied.

In general, I should prefer piling the brood on weak rather than strong colonies, especially in working for comb honey, for the strong colonies do not need help, and such a mass of brood will make the weak ones strong in a short time.

I do not know what should make the difference, but I have in many cases put the queen on foundation in a lower story with all the brood in the upper story and an excluder between, when the queen would go to laying within two or three days. I should not, however, call that a shaken swarm at all.

The advice to make the weak help the strong in spring rather than to make the strong help the weak is in accord, I think, with what I have always advised. C. C. MILLER.

Basswood Seedlings in Their Second Year.

On page 183, J. D. Gehring quotes me as saying concerning basswood, "that seedling trees never live to the second year." Unless Mr. Gehring can refer me to page and paragraph, I can hardly believe I ever said anything so foolish as that. There are thousands upon thousands of seedling basswoods that have lived many years beyond their second year; in fact, I do not know that I ever saw a basswood tree that was not a seedling, except a few that were dug as sprouts coming up about a tree or a stump.

What probably was thus misconstrued by Mr. Gehring, was my saying that among the many seedlings coming up under the row of trees in front of my house, none has ever lived to the second year. If Mr. Gehring can tell us why this is so, I should be thankful. It can hardly be the character of the soil, for the trees under which these seedlings spring up each year are of luxuriant growth, and in the woods, at the back part of the place where seedlings continue in growth, the soil is much the same. There is, however, in the woods a natural mulching of forest leaves, and it is possible that may make the difference. C. C. MILLER.

Starters or Full Sheets—Clipping—Other Questions.

1. Which do you consider the most economical, starters or full sheets of foundation? I see there is a difference of opinion.
2. Do you think it best to clip the queen's wing?
3. Which is the best for this climate, to put bees in a dry cellar or put on their "overcoat?"
4. How would a dead air-space all around the hive of 2 inches do without any packing to make nests for mice?
5. Will it injure a young queen to keep her laying in a small nucleus for several days, then put her in a large colony? Some say that it will.
6. What do you think of the Swarthmore plan of rearing queens and fertilizing them? Is that not too much inbreeding?
7. I want to Italianize a lot of hybrid colonies, and I want the best kind of Italian strains. IDAHO.

ANSWERS.—1. I think that for most people there is sufficient advantage to pay the extra cost of full sheets.

2. It is most decidedly best for me, and the probability is that it would be for you.

3. I don't know, but I *think* the climate is mild enough in Idaho to favor outdoor wintering.

4. It will answer a very good purpose. Arthur C. Miller has reported favorably on wrapping tarred paper about the hives and tying with strings.

5. I should not be afraid of it.

6. So far as I understand it, drones not related to the queen can be used by that plan.

7. You can buy a queen for each colony, but it will be less expensive to get one or two queens and then breed from these.

Uniting and Feeding Bees.

My 24 colonies of bees are in the cellar under the dining-room. They are nice and dry, but I have not examined them nor molested them at all, and as the weather is getting warm I am anxious to find out how they are off for stores, as I had a few light colonies. I wish you would advise how to proceed. If I find them too light to pull through would I better unite two or more later on and feed them, or try to feed them in the cellar separately?

As I do not care for a very big increase in colonies, would it not be as well to unite early in the spring? If I do that, how will I manage the queens? NEBRASKA.

ANSWER.—The weather seems unusually warm for the time of year, and there is little doubt that by the time this reaches you there will be a day warm enough for bees to fly, when you can take them out of the cellar, and then it will be easier for you to tell which colonies are dangerously light in stores, and supply their needs. Then if you are afraid of cold weather afterward, you can return them to the cellar. Feed those that need it, according to instructions in your text-book and advice in this department. Do not unite colonies because light in stores, but if weak in bees it may be advisable. Whatever colonies are to be united may as well be united now as later. You need pay no attention to the queens when uniting, as the bees will look out for that, but if you have any preference for queens kill the poorer of the two to be united. Indeed, there is some advantage in any case in killing one of the queens a day or two before uniting.

Painting Hives—Section Starters—Clovers—Size of Hive.

1. Would you prefer hives painted or not?
2. What size starters in the sections?
3. What kind of clover would you have for quality and quantity, alsike or the white for honey?
4. What size hive, 8 or 10 frame dovetailed, for comb honey?
Minnesota.

Answers.—1. I prefer unpainted hives, but don't like their looks.

2. I use for 4¼x4¼ sections a top starter 3⅞ wide and 3¼ deep, and a bottom starter 3⅞ wide and ⅝ deep.

3. I hardly know; perhaps 8-frame if very close attention can be given to the business; certainly 10-frame if the bees can have much attention.

Transferring—Extracting to Give Room—Artificial Pollen.

I am a beginner with bees, but have read a good deal about their management. I have 25 colonies, the most of them in Langstroth hives, but some in box-hives, and I want to transfer them as early as possible.

1. When is the best time to transfer?

2. The most of my bees are long-tongue Italians, and they have a good deal of brood at present, but I don't think they have room enough, as they started in the winter with 10 Langstroth frames full of honey. Would you advise extracting part of the frames?

3. The bees have been carrying in sawdust from the mill, and gathering pollen from the cedar-trees. I gave them about two quarts of wheat flour, and they carried it into the hives in about three hours. Is that good for them? or should they have rye flour?
Kentucky.

Answers.—1. At the time of fruit-bloom is a good time to transfer, but the tendency nowadays is toward waiting till the colony swarms and then transferring 21 days after swarming.

2. Go a little slow about extracting to give room. Bees are using up honey very rapidly in rearing brood, and very likely they will empty out the honey fast enough. However, you can inspect the combs, and if you find no empty cells, but all filled with either brood or honey, and a large proportion of it honey, then it may be advisable to make room. There is more likelihood that the queen will be crowded with honey much later in the season.

3. I don't suppose there is any material difference between wheat and rye flour. It may be not so well to give fine flour as to give bran and all.

Taking Bees from the Cellar.

I have been keeping bees for five years, and have been a close reader of bee-literature, but I do not remember ever seeing anything in the papers as to the different methods used by bee-keepers in taking their bees from the cellar in the spring.

Perhaps none of them have the trouble I do, that of the bees flying before I can get them from the cellar-door to the stand in the yard—about 4 rods. I have put an old piece of carpet over the front of the hive, but they will crawl on it, and when I shake them off they do not know where they belong.
Wisconsin.

Answer.—If you are going to take out all the bees on the same day, smoke each colony a little before taking them out. That'll fix 'em. But don't smoke in the cellar unless you're going to take all out. You can, however, smoke them just as soon as you get them outside the cellar-door. Or take a *big* rag, dip it in cold water and don't wring it out, but lay it dripping against the entrance so that no bee can get out. They'll not take the trouble to crawl on the rag when it is wet.

Using Combs on Which Bees Died.

1. I bought 3 colonies of bees, and lost one. What is the best thing to do with the old comb? Would I better take out the comb and scald the frames, or would it be all right to put another colony in the old hive and let the bees clean it out to suit themselves?

2. How is the best way to hive a swarm?

3. Would it be all right to make a building 4x4x7 feet, and put a swarm into it? Would the bees swarm in the spring, or would it keep increasing and not swarm at all? And would they be more likely to rob small colonies?

4. Why do you shake the supers during the flow of honey? Why not shake the bees down?

5. How can you tell when a colony is going to swarm?
Pennsylvania.

Answers.—1. Give it to the swarm just as it is. If badly daubed with diarrhea scrape off the worst.

2. The very best way I know of is to have your queen clipped, and when the swarm issues take away the old hive and set the empty one in its place. Then the returning bees will hive themselves, and you can let the clipped queen run in with them. If you see the queen when the swarm issues, catch her and drop her among the bees when they have started into the hive.

3. Don't try it. They would not be likely to swarm, but it would not be entirely reliable as a preventive. A colony in an ordinarily large hive would be just as sure not to swarm, and it would grow just as large. But there would be no special danger of the bees robbing other colonies.

4. Probably more bee-keepers smoke than shake. But if you can succeed in shaking out all the bees it's a good thing, for it's a very difficult thing to smoke them all down.

5. Look for queen-cells, and expect a swarm when the first queen-cell is sealed. If there is a second swarm it will be somewhere about eight days after the first. When you're uncertain about a second swarm, put your ear to the hive in the evening, and if you hear the young queen piping look for a swarm the next day.

Is Carrying Pollen Indication of Queen's Presence?

Is it a sure indication that a colony has a queen when the workers are carrying in pollen and working nicely? I think it is. Am I right?
Wisconsin.

Answer.—I would hardly call it a *sure* indication. A colony may continue to carry in pollen for some time after the loss of the queen, as evidenced by the unusual amount of pollen in a queenless colony, but, as a general rule, you need have little anxiety about a colony hard at work and carrying in large loads of pollen.

Wiring Shallow Frames.

How many wires should there be in those 6-inch shallow frames? and where should they be?
Oregon.

Answer.—Put in two wires at equal distances from top and bottom bars and from each other.

Spring Feeding—Blacks vs. Italians.

I have a few colonies of black bees and some Italians in dovetailed hives. I use self-spacing Hoffman frames.

1. If I remove the division-board and divide the space up among the frames, would the bees build between the frames? The combs are good and straight.

2. I am feeding my strong colonies once a day. Will I profit by it?

3. I work my apiary for comb honey, and I think the black bees finish a section closer, smoother, and the wax looks whiter than that of the Italians. Is it imagination or a fact?
Wisconsin.

Answers.—1. I'm not sure whether I understand you. There ought to be no division-board in the hive, but very likely you mean the dummy which should be in one side of the hive. If you take that out and then equalize the spacing, the bees will build out the cells sufficiently to fill up all the extra space given to them. What do you want to take the dummy out for?

2. Maybe, and maybe not. If you feed them on days that will not permit them to fly, when they are not lacking in stores, you're likely to do mischief.

3. It is very likely a fact, so far as whiteness is concerned. There are Italians which fill out the honey so close to the cappings that it doesn't look as white as where there is a good air-space left. Then there are other Italians that make very white work.

Pounds of Honey to One of Wax.

How many pounds of honey will a colony of bees consume in making one pound of wax?
Utah.

Answer.—For a long time it was generally accepted that it takes 20 pounds of honey to make one of wax. Of late there has been much discussion regarding it, some estimates being as low as two or three pounds of honey for one of wax, with perhaps a more general gravitating toward five to seven.

Buying Italian Bees—Formalin Gas for Foul Brood—Feeding in Spring.

1. Where can I purchase a Langstroth 4-frame nucleus, with a laying Italian queen?

2. Where can I get formalin gas? and how must I use it for foul brood?

3. Can I feed sugar syrup to bees as soon as they can fly out in the spring? If so, in what quantity?

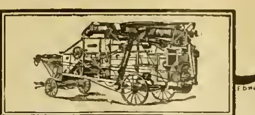
4. I have just melted up some brood-combs with honey and pollen all together. I took off the wax when it was melted—can I feed that honey to the bees this spring?
Wisconsin.

Answers.—1. I think the publishers of this Journal can serve you, unless you find something nearer home in the advertising columns.

2 Get it through your druggist. I know nothing about its use from actual experience, but I believe the drug is placed in a box having an opening through which the fumes escape into a hive-body placed over, the combs to be operated on being in this hive.

3. Yes, when bees fly freely you can feed any quantity you like.

4. Yes.



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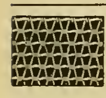

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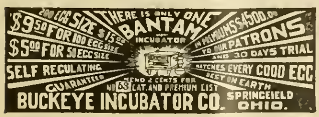

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FROM MANY FIELDS

An Abnormal Season.

Last season was very abnormal, and the bees did not do extra well. There was too much wet and cool weather during fruit-bloom, and the bees got nothing of it. There was plenty of white clover, but whatever honey they got was used for brood-rearing. There was excessive swarming, but the swarms were very hard to catch; some went right off and never clustered. The bees were always very cross. D. E. EVERS.

Otoe Co., Nebr., March 10.

Wintering Bees in Cellars Containing Running Water.

Over 20 years ago my father had five apiaries, and wintered mostly in cellars. My oldest brother did the managing. In one cellar there was a running spring of water. Last summer my brother told me that the bees in that cellar wintered better than in any of the others. Perhaps the *warmth* of the spring water had something to do with it.

On page 159, Mr. H. B. Stump gives a good record for cellar-wintered bees, and makes the remark that "the cellar is very damp, so that water stands on the walls."

Mr. G. M. Doolittle has contended for years that moisture did no harm, if the temperature was kept uniform at 45 degrees. Mr. Stump seems to go beyond that and claims that moisture in the cellar not only does no harm to the bees, but is a positive *benefit*.

If I am not mistaken, that phase of cellar-wintering has not been discussed in the bee-journals. If there are people who winter bees in cellars containing springs they might be in a position to give facts of considerable value to bee-keepers in general.

I would like to know if Mr. Doolittle would recommend building a bee-cellar over a spring, in preference to choosing a dry bank, both locations being on a side hill.

JOHN S. CALLBREATH.

Delaware Co., N. Y., March 9.

Some Tennessee Honey-Plants.

We have not had very cold weather this winter. Our bees have wintered very well so far. They are gathering pollen and some honey. The maple and elm trees are now in bloom. We have a tree here commonly called bee-willow—I have forgotten the botanical name of it. It is now in bloom. On fair days the bees have a jubilee. Garden flowers will soon be in bloom, then the peach-trees. In April, apple-trees and other fruit-trees. In May, locust and tulip or poplar timber will be in bloom. Various other trees will be blooming during spring and summer. A few farmers sów buckwheat, which comes in July and August. Red clover is not cultivated as it should be, but we have some white clover in the pastures, which gives some nectar if the season is favorable. Another source of honey is honey-dew; it comes the last of May and first of June. We then get fine honey if the weather is favorable for the bees to work. Sometimes the rain makes it unfavorable for bees to gather fall honey. We have a weed that grows spontaneously in the fields. Some call it stickweed, some frostweed; it is in bloom just before frost, hence the name. It granulates so the bees cannot do much with it. H. M. SHERFEY.

Washington Co., Tenn., March 11.

Foul Brood in Illinois.

The Foul Brood Bill now before our State Legislature is a very important one, and one of a broader nature than at first may be supposed by many,

The bee-keepers are not the only ones interested, by any means. The farmer that grows the small red or the mammoth red clover, alsike and white clover is also affected by the number of bees kept in the vicinity, the fact

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Tells all about Bees in California. The yields and Price of Honey; the Pasturage and Nectar-Producing Plants; the Bee-Ranches and how they are conducted. In fact the entire field is fully covered by an expert bee-man. Besides this the paper also tells you all about California Agriculture and Horticulture. $1.00 per year; 6 months, 50 cents. Sample copies, 10 cents.
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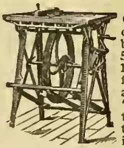

Read what J. I. PARENT, of Charlton, N. Y., says: "We cut with one of your Combined Machines, last winter, 50 chaff hives with 7-in. cap, 100 honey racks, 500 brood-frames, 2,000 honey boxes, and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make, and we expect to do it with this Saw. It will do all you say it will." Catalog and price-list free.
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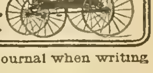

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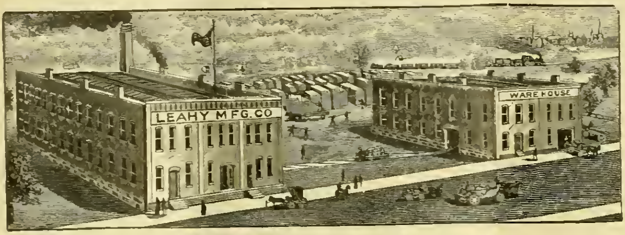

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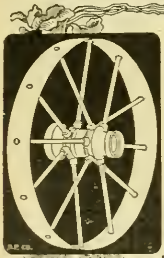

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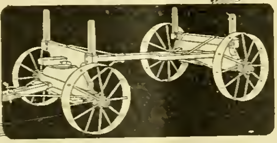

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GUS. DITTMER, Augusta, Wis.

being that the honey-bees are largely instrumental in the fertilization of the blossoms, thus giving the farmer a good crop of seed for future use and sale, for its use in reseeding his meadows and pastures is so essential to the growing of farm stock of almost all kinds. The buckwheat crop is also much improved by the work of our bees. The fruit-grower is largely helped in securing of better crops of fruit by the aid of the bees.

The bee-keeper needs such a law as a just protection to his property and to its very perpetuity. Thus it will be seen that, from a narrow view, three classes of our people are in need of a foul brood law—the farmer, the fruit-grower, and the bee-keeper. If this dread disease is allowed to go unchecked very few bees may be left to do the much-needed work for those above-named.

Our State needs such a law, and that badly. As bee-keepers we should now he fully awake and shower our law-makers with letters asking their earnest support.

I have at hand a letter from our representative, Hon. W. W. Gillespie, stating, as one of the House Committee, that the bill had been read and recommended by the Committee, that it do pass. This is encouraging so far. He also said he would do all he could to secure its passage. F. A. SNELL.

Carroll Co., Ill.

The Hamilton Co., Ohio, Association.

It has been frequently urged in the bee-journals that one of the pressing necessities of the times is the enactment of a law in every State of the Union to protect the apiary from the ravages of foul brood.

It is to be regretted that so large and important a State as Ohio has no such law on its statute books, yet from Government statistics it produces more honey than the State of Colorado; its bee-keepers are more equally distributed over the State, and the consumption of honey in its manufacturing industries is so extensive that other States have to be drawn on for supplies to meet the demand.

A number of bee-keepers in Cincinnati, and adjoining surburbs in the county of Hamilton, held a meeting last August and formed an organization called the "Hamilton County Bee-Keepers' Association," the first of its kind, exclusively in the State, with a membership of 50, and at each monthly meeting of the executive committee new members are being enrolled, and from all indications, where the constitution and objects of the association are fully understood by bee-keepers. still greater accessions to its ranks are expected, as in this county there are upwards of 500 bee-keepers.

The executive committee feel gratified and enthusiastic at the result of their preliminary efforts. They would strongly urge through the medium of the American Bee Journal, that similar initiative steps be taken in each of the 88 counties in the State, as early as possible this spring, so that this association may have a united support in demanding of the Legislature, through their delegates, the enactment of laws for the suppression of foul brood, as it is enjoyed by California, Colorado, Wisconsin, New York, Michigan, Florida, etc.

Hamilton Co., Ohio. WM. J. GILLILAND.

Producer's Name on Honey.

In reading the article by P. D. Jones, and your reply, on page 83, I was very much impressed with the seriousness of this vital question, and I think we need an intelligent adjustment of this matter. I wish to register my protest along with that of Mr. Jones. I, like him, with considerable skill and painstaking, produce considerable comb honey, and, according to grade, I am willing to stand back of every pound with my own name. I sell my honey in a wholesale way, very often the whole crop to a single concern, with each section stamped, and so far they seem to prefer it that way; in fact, this year I was asked to stamp my honey, and I know they do not erase the name, because I have a great many letters from dealers who say they saw my honey, and asking quotations on honey. Of

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course, I am compelled to tell them So-and-So of their place bought my entire crop, and, no doubt, can supply them, but will be pleased to correspond for my crop next year. This makes competition and higher prices, and that is my reward.

Now, if the dealer was to erase my name and substitute his own he would be robbing me of my just dues, and if that is not illegal it ought to be punishable. But there is an unwritten law governing these things. I am not in the mood, neither do I have the inclination, to make a reputation for Mr. A's or Mr. B's honey; neither do I care to build up the reputation of all the honey produced in Idaho by painstaking care. And, there is a natural law of compensation which rewards each individual for their greater efforts. Now, Mr. York, you would not think of erasing the name from a package of D. M. Ferry's seeds and substituting your own, and selling it as such. If you erase the name from the honey you certainly do a very unjust thing. Come, now, Mr. York, own up that you are beaten; there's two to one, and numbers count.

ALMA OLSON.

Fremont Co., Idaho, Feb. 21.

[Were we to say more on this subject it would only be to repeat what we have said many times. We never say on our labels that *we* are *the producer's* of the honey we sell. We have spent hundreds of dollars in creating a demand for "York's Honey," and not for Olson's or that produced by Jones. Their whole crops would be but as a "drop in the bucket" compared to what we sell during a season. We stand back of all the honey that goes out as "York's Honey," and know nothing of Olson's, or Nelson's, or Miller's honey, and care nothing about their honey. We are not working to sell their honey, unless we buy it, when it becomes "York's Honey," like any other good honey we buy. After it passes out of their hands they have nothing further to do with it, having received their pay for it.

When you sell your wheat or oats to a dealer do you insist on having your name on the bags holding the wheat or oats? Well, hardly!—EDITOR.]

That Missing Link in Queen-Rearing.

With the editor's permission, I will give my notion on the so-called umbilicus, "missing link" or "line," as you please.

Where does it begin and end? What is its object? Dr. Gallup says, page 454, "attached to the vulva." He, being a doctor, is in a good position to know what he writes about. When I read this it set me to thinking. What a place for the beginning of an umbilical cord, anyhow! Do all queens have them? How about the workers and poor drones? Would "umbilical queens" be on the market, and what would be the price of the "extra-select-tested" from the "prize long-umbilicus queen?" These and many more questions came to my mind as I lay awake nights.

After reading the text-books and papers I resolved to let my bees settle the matter, and set some nuclei going for close observation. Let me say here that my library has 34 volumes (colonies) of 20 pages each, and for many years they have been my best books. Meanwhile Mr. Doolittle, page 569, took up the "line" and tightened the kinks by corroborating Dr. Gallup's article. He says: According to my old teacher, the missing "link," that which will produce the best queens—is supplied in nearly every instance when using the plan of queen-rearing as given in "Scientific Queen-Rearing." But Mr. Doolittle has given us the ending of the "line" as being "all under and through the royal jelly in every conceivable direction," while his old teacher says: "Those roots and tendrils do not go wandering around through the mass of royal jelly." Which is right, teacher or pupil? According to the former, the object of the cord is "to suck up substance from the jelly and convey it to the

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Bees For Sale.

100 17 frame-Hive Colonies at ....$3 50 each
150 3-frame Nuclei at .... 2.00 each

13A5t G. W. GATES, Bartlett, Tenn.

SHEEP MONEY IS GOOD MONEY and easy to make if you work for us. We will start you in business and furnish the capital. Work light and easy. Send 10 cents for full line of samples and particulars.
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65 colonies of bees, 46 of which are in Root's dovetailed hives, and the remainder in chaff-hives. Apply to
13A2t JAMES McKAY, Tuscola, Mich.

Wanted TO BUY
30 to 50 colonies of Bees on Hoffman frames.
Address, H. JOHANSEN,
Fremont Hotel, 19 South Clark St., Chicago, Ill.
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This is a good time to send in your Beeswax. We are paying 28 cents a pound—CASH—for best yellow, upon its receipt, or 30 cents in trade. Impure wax not taken at any price.
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Daughters of Select Imported Italian, Select long-tongued (Moore's), and Select, Straight 5-band Queens. Bred 3¼ miles apart, and mated to select drones. No bees owned within 2½ miles; none impure within 3, and but few within 5 miles. No disease. 30 years' experience. WARRANTED QUEENS, 75 cents each; TESTED, $1.50 each. Discount on large orders.

Contracts with dealers a specialty. Discount after July 1st

Send for circular.

JOHN M. DAVIS,
9A26t SPRING HILL, TENN.

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Catnip is the very best honey-producing plant. I have sold in nearly every State in the Union. I have a small amount of this good seed yet. Order soon. 3 ozs. for 25c; or one lb. for $1.15. **O. S. HINSDALE,**
14A1t KENDRICK, IDAHO.

IT IS A FACT

That our line of Bee-Keepers' Supplies are some of the best goods in the world, and that our system of dealing with our trade is not excelled by anybody. Plenty of testimony from satisfied customers proves these things. Write and get our suggestions, our catalog and our discounts for winter-time orders—ALL FREE.

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PRICE CATCHES TRADE,

but our quality holds it year after year after year.
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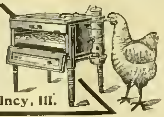

$12.80 For 200 Egg INCUBATOR

Perfect in construction and action. Hatches every fertile egg. Write for catalog to-day.
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SWEET CLOVER

And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5lb	10lb	25lb	50lb
Sweet Clover (white).....	$ .75	$1.40	$3.25	$6.00
Sweet Clover (yellow)....	.90	1.70	4.00	7.50
Alsike Clover	1.00	1.80	4.25	8.00
White Clover	1.50	2.80	6.50	12.50
Alfalfa Clover	1.00	1.80	4.25	8.00

Prices subject to market changes.

Single pound 5 cents more than the 5-pound rate, and 10 cents extra for postage and sack.

Add 25 cents to your order, for cartage, if wanted by freight, or 10 cents per pound if wanted by mail.

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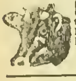

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queen," and the pupil leaves the same impression.

Now we have it all in a nutshell. Isn't it grand? With the subject set forth and championed by such high authorities as quoted above, I have been a little slow to expose myself. But with my bee-nature to back me up, I now wade into the truth fearlessly.

My nuclei were kept going until late in November—carried them in and wrapped them up nights. The cells were examined frequently, and in the pupa stage carefully dissected, mounted in water and viewed with the aid of lenses. The so-called "link" was exposed and magnified separately, and in no instance did it prove to be anything more than a part of the delicate lining that the pupa queen gives to her couch when she "lies down to pleasant dreams," as it were.

Umbilicus nonsense! There is no such thing. Sting-trowel theories dwindle to nothing in comparison. Nay, my bees have a *stronger* proof that it is a fallacy. Here is a truth they have taught me, and for their sake I will speak for them. I challenge the entire bee-keeping fraternity to disprove it. Here it is: *Honey-bees, including queens, drones and workers, are inactive and take no food while in the pupa stage.* This is also true in other of the higher orders on insects, as the Lepidoptera and Diptera. If these assertions are correct no further proof is necessary.

The lump of royal jelly in the cell has nothing to do whatever with the kind of queen it contained. Why, it never became a part of her. It is what she *ate*, and not the left-over dried waste, that developed her.

Nature is what she is, and she will not yield one jot to our pet theories, even though we spin them ever so fine. We can produce the highest grade of "puddin'" only by living in close touch with our bees and hearkening to all they teach. EVAN E. EDWARDS.

Madison Co., Ind.

Stinging a Hatpin—Other Peculiarities of Bees.

I think I have an explanation for the action of bees in stinging a hatpin head. It involves the trait I learned when a boy, back in Illinois, by which we boys used to jug bumble-bees, hornets and yellow jackets, and doubtless would catch bees or any stinging insect.

We would take a jug (white preferred) partly filled with water, and set it near a nest, in plain sight, and then disturb the inmates, when they would come out and fight the jug, stinging at the mouth until they went in with the peculiar thud made by an insect going into a jug or the bung-hole of a barrel. Disturbing them a few times would exterminate the entire colony. Bees generally sting at some mark, as mouth, nose, eye or ear. I have had them sting at a white shirt-button on my wrist-band.

If there are only one or two bees that are anxious to fight, I try to get them to attack the nose of my smoker, and give them a whiff of smoke, which soon quiets their nerves.

My bees were very cross when I got them three years ago, but they are quite gentle now. Bees are irritated by jars, as a person's breath, the smell of poison from the stinger. I avoid these things as much as possible. I don't think they know me from any one else, or pay any attention to any smells, except the above. I wear the clothes which I wear at my other farm work, and they are often tainted with various smells. The sweat from my face often drops into the hive without disturbing the bees. I think my bees know when I have the smoker, because a small amount of smoke—so little that it does not seem to be sufficient to have any effect—keeps them quiet, when if there was no smoke used they would come out for a general fight.

Prowers Co., Colo. C. STIMSON.

The Season of 1902.

The last season, around here, was a bad one for gathering honey, from early spring to late fall. There was plenty of bloom in its season, but having so much rain and cold spells, the rains washed all nectar out of the bloom, which made it hard for bees to gather honey, except from the basswood flow, and for two

Good Bye
old whitewash brush with your hard work and waste of time.

The Hardie Whitewashing Machine
not only works much faster but forces the liquid into every crack and destroys insect life which a brush would pass over.

Send $7.50 for the complete machine, express prepaid, if you are not satisfied we return the money. Full particulars if you need them. Address Dept. H

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Wanted to Purchase

200 to 400 colonies of **BEES**—northern California, Oregon or Texas. State price, f.o.b. cars; also kind of hive, with and without supers; and condition of bees, about April 1st to 10th.

Address, DR. GEO. D. MITCHELL & Co.,
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Send
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when the hens lay. Keep them laying. For hatching and brooding use the best reasonable priced Incubators and Brooders — built upon honor, sold upon guarantee.

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AN OPPORTUNITY.

Barred Plymouth Rock Poultry, Strawberry Plants, Bee Fixtures. Send for circular.
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The Danz. Hive—
The Comb Honey Hive.

We sell it. We are authorized jobbing agents for THE A. I. ROOT CO., for Michigan. Send us a list of the goods you want for this season, and let us quote you prices. Beeswax wanted. Send for catalog. H. M. HUNT & SON,
10A17t BELL BRANCH, MICH.

Bee-Keepers, Remember

that the freight rates from Toledo are the lowest of any city in the U.S. We sell

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GRIGGS BROS.,
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BASSWOOD TREES.

One to two feet..........	25 for $1.00;	100 for $3.00
Two to three feet	25 for 1.25;	100 for 4.00
Three to four feet.......	25 for 1.50;	100 for 5.00

12A3t G. W. PETRIE, Fairmont, Minn.

Please mention Bee Journal when writing

or three weeks during this flow the bees did fairly well.

I put out 6 colonies, spring count; 2 of them dwindled out, which left me 4. I bought 3 prime swarms, and caught 2 wild ones, and increased to 15 colonies, but did not get much honey. I had to feed syrup to 3 late swarms, and I am at present feeding 5 colonies sugar candy; I may have to feed more after putting them out on the summer stands.

I am in a good location, on the DesMoines river, with a good range for bees, season considered. Last season was a bad one for robber-bees getting in their work; I had to keep the hive-entrances closed pretty nearly all season. I had one weak colony that was attacked by robbers, and they locked horns with the robbers, and went out, bag and baggage.

I winter my bees in a storm cave with sand floor; it is as dry as can be; the door faces the south, and in fine weather, when the sun is shining, I open the door and the bees come out and have a flight. I am letting them have their second flight to-day, there being no snow on the ground, and they are well sheltered from wind.

I bought 3 colonies 2 years ago; they were in old racked up boxes; the wax-worms got away with one of them.

I could not get along without the American Bee Journal; it is a weekly visitor to me.

Say, couldn't some of those smart Alecs breed up a strain of bees without a sting, as well as a strain of bees with a longer tongue?

It is a fine day, and the bees are out having a playing spell. W. IRVINE.

Webster Co., Iowa, March 7.

CONVENTION NOTICE.

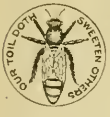
Utah.—The spring meeting of the Utah State Bee-Keepers' Association will be held in the City and County Building, Salt Lake City, April 5, at 10 o'clock a.m. All bee keepers of Utah and adjoining States are cordially invited to be present. J. N. ELLIOTT, Sec.

E. S. LOVESY, Pres.

Missouri.—Bee-keepers of Missouri will meet in convention at Moberly, in the Commercial Club Rooms, at 2 o'clock p.m., on April 22, 1903, to organize a Missouri State Bee-Keepers' Association. We expect to complete our organization on that day and have some bee-talks the day following. Everybody is invited who is interested in bees and honey. Let us have a good turn-out and a good time. Good hotel accommodations can be had at $1.00 and $2.00 a day. The Monitor Printing Company will tell you where the Commercial Club rooms are located. W. T. CARY, Acting Secretary.

Wakenda, Mo.

A Celluloid Queen-Button is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-lapel. It often serves to introduce the subject of honey, and frequently leads to a sale.


OUR TOIL DOTH SWEETEN OTHERS

NOTE.—One reader writes: "I have every reason to believe that it would be a very good idea for every bee-keeper to wear one [of the buttons] as it will cause people to ask questions about the busy bee, and many a conversation thus started would wind up with the sale of more or less honey; at any rate it would give the bee-keeper a superior opportunity to enlighten many a person in regard to honey and bees.

The picture shown herewith is a reproduction of a motto queen-button that we are furnishing to bee-keepers. It has a pin on the underside to fasten it.

Price, by mail, 6 cents; two for 10 cents; or 6 for 25 cents. Send all orders to the office of the American Bee Journal.

California! If you care to know of its Fruits, Flowers, Climate or Resources, send for a sample copy of California's Favorite Paper—

The Pacific Rural Press,

The leading Horticultural and Agricultural paper of the Pacific Coast. Published weekly, handsomely illustrated, $2.00 per annum. Sample copy free.

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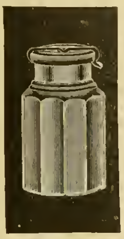
Tip-Top Glass Honey-Jars

1-pound.



¾-pound.

7-ounce.

The pictures shown herewith represent the best Jars for honey that we know of. They are made of the clearest flint glass, and when filled with honey, and neat labels attached, they make as handsome packages as can be imagined. The glass top rests on a flat rubber ring, and is held in place by a flat steel spring across the top as shown. They are practically air-tight, thus permitting no leak, which is an important thing with honey-sellers.

We can furnish these Jars, f.o.b. Chicago, at these prices:

	1 gross.	*2 gr.*	*4 gr.*
1-lb. Jars	$5.00	$9.50	$18.00
¾-lb. "	4.50	8.50	16.50
7-oz. "	4.00	7.50	14.50

If you try them once you will likely use no other kind of top or sealing arrangement for honey-jars.

GEORGE W. YORK & CO.
144 & 146 E. Erie Street, · CHICAGO, ILL.

A Perfect Ear.—The Seed-Corn question is a subject of much interest to the farmers just now, and there is perhaps more space devoted to it in agricultural papers than any other subject. The corn-judging schools which have been held in Iowa and Illinois for 2 or 3 years past have been well attended, and farmers who have always thought that they knew what a good ear of corn was, are finding that there are more points to be considered than they had heretofore imagined could exist. The Golden West Corn is a new variety introduced this year by the Iowa Seed Co., of Des Moines, Iowa. This corn is perhaps the greatest step in advance over old varieties which has been made for a number of years, but it still must be recognized that as yet perfect corn does not exist. The best judges of seed-corn do not claim ever to have seen an ear which would score 100 percent when carefully judged. There are many points to be taken into consideration; the length and circumference of the ear, and depth, color and shape of grain; solidity, size and color of cob, filling out at tips and butts, proportion of corn to cob, etc., and it is difficult to get all the good characteristics combined in any one ear.

The above-named Seed Company have this year published a Corn Manual which is one of the most valuable little books that we have seen. It gives a great amount of practical information which has never before been published, and also full instructions for judging seed-corn. Every one who expects to grow even a single acre of corn should have a copy of this book to help select their seed-corn in a more intelligent way, and the Iowa Seed Co. offer to send a copy to any reader of this paper for 10 cents in stamps, or they will send it free to any one purchasing seed-corn from them this year. Please mention the American Bee Journal when writing.

For Sale **30 COLONIES** of Italian Bees, in Langstroth and Simplicity hives. Price from $5.00 to $7.00 per colony. Satisfaction guaranteed.

JOHN HERBERT,
13A2t HAMPSHIRE, KANE CO., ILL.

HONEY AND BEESWAX
MARKET QUOTATIONS.

CHICAGO, March 24.—The trade is of small volume with little change in prices of any of the grades. Choice white comb sells at 15@16c with amber and other off grades slow at 2@5c less. Extracted, 7@8c for white, according to kind and flavor; dark grades, 5½@6½c. Beeswax, 30c. R. A. BURNETT & CO.

ALBANY, N. Y., Mar. 14. — Honey demand quiet; receipts and stock light. Comb selling, light, 15c; mixed, 14@15c; dark, 13@14c. Extracted, dark, at 7@7½c. Beeswax firm, 30@32c. H. R. WRIGHT.

KANSAS CITY, Mar. 14.—The demand for both comb and extracted honey is better, receipts light. We quote as follows: Extra fancy white comb, per case, $3.40; strictly No. 1, $3.30; No. 1 amber, $3@$3.25; No. 2, white and amber, $2.50. Extracted, white, per pound, 7c; amber, 6@6½c. Beeswax, 30c. C. C. CLEMONS & CO.

CINCINNATI, March 11—The demand for extracted honey is good at the following prices: Amber, barrels, 5½@6½c, according to quality; white clover, 8@9c. Fancy comb honey, 15½@16½c. Beeswax strong at 30c.
THE FRED W. MUTH CO.

NEW YORK, March 5.—There is a fair demand for white comb at 15c per pound for fancy, 13@14c for No. 1, and 12c for amber, with sufficient supply to meet the demand. Dark honey will be cleaned up with very little left; it is selling at about 11c per pound. Extracted rather weak and in quantity lots, prices generally shaded. We quote: White, 7@7½ cents; amber, 6½@7c: dark, 6c. Beeswax scarce at 30@31c for good average. HILDRETH & SEGELKEN.

CINCINNATI, Mar. 7.—The comb honey market has weakened a little more; is freely offered at following prices: Fancy white, 14@15c; no demand for ambers whatever. The market for extracted has not been changed and prices are as follows: Amber in barrels, 5¼@5½c; in cans 6@6½c; white clover, 8@8½c. Beeswax, 28@30c.
C. H. W. WEBER.

SAN FRANCISCO, Mar. 11.—White comb honey, 12½@13½c; amber, 9@11c; dark, 7@7½c. Extracted, white, 6¾@7¼c; light amber, 5¾@6c; amber, 5@5¼c: dark, 4@4½c. Beeswax, good to choice, light 27@29c; dark, 25@26c.

Demand is fair on local account for water-white, uncandied, but there is not much of this sort obtainable. Market for same is firm at ruling rates. Candied stock and common qualities are going at somewhat irregular and rather easy figures, holders as a rule being desirous of effecting an early clean-up.

WANTED WHITE CLOVER EXTRACTED HONEY! Send sample and best price delivered here; also Fancy Comb wanted in no-drip cases.

THE FRED W. MUTH CO.
32Atf Front and Walnut, CINCINNATI, OHIO.

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$300,000,000.00 A YEAR and you may have part of it if you work for us. Uncle Sam's poultry product pays that sum. Send 10c for samples and particulars. We furnish capital to start you in business. Draper Publishing Co., Chicago, Ill.

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FREE FOR A MONTH....

If you are interested in Sheep in any way you cannot afford to be without the best Sheep Paper published in the United States.

Wool Markets and Sheep

has a hobby which is the sheep-breeder and his industry, first, foremost and all the time. Are you interested? Write to-day.

WOOL MARKETS AND SHEEP, CHICAGO, ILL.

Helper Wanted

Young man with some experience to assist in large apiary in Chicago, close to church and city; everything modern. To help man with years of experience who is also a thorough mechanic. Give age, experience, wages wanted, reference, etc. Address, G. PURPLE,
Care American Bee Journal,
144 E. Erie Street, CHICAGO, ILL.

The Best Bee-Goods in the World....

are no better than those we make, and the chances are that they are not so good. If you buy of us **you will not be disappointed. We are undersold by no one.** Send for new catalog and price-list and free copy of THE AMERICAN BEE-KEEPER; in its thirteenth year; 50 cents a year; especially for beginners.

—THE—

W. T. Falconer Mfg. Co.,
JAMESTOWN, N. Y.

W. M. GERRISH, Epping, N.H., carries a full line of our goods at catalog prices. Order of him and save the freight.

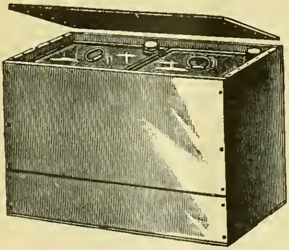
Please mention Bee Journal when writing.

Only 8c a lb.

FOR THE BEST

White Alfalfa Honey

ALL IN 60-LB. CANS



A sample by mail, 10c for package and postage. By freight, f.o.b. Chicago: 2 cans in box (120 lbs.) at 8 cents a pound. We can furnish Basswood Honey at ½c a pound more.

This Alfalfa Honey should go off like hot-cakes. Better order at once, and get a good supply for your customers.

GEORGE W. YORK & CO.,
144 & 146 E. Erie Street, - CHICAGO, ILL.

If you want the Bee-Book

That covers the whole Apicultural Field more completely than any other published, send $1.20 to

Prof. A. J. Cook, Claremont, Cal.,

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We guarantee Satisfaction. What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS. PATENT WEED-PROCESS SHEETING.

Why does it sell so well? Because it has always given better satisfaction than any other. Because **in 25 years** there have not been any complaints, but thousands of compliments.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

Bee-Keepers' Supplies OF ALL KINDS *****

Very fine pure-bred BARRED PLYMOUTH ROCK Chickens and Eggs for sale at very low prices.

Langstroth on the Honey-Bee—Revised,
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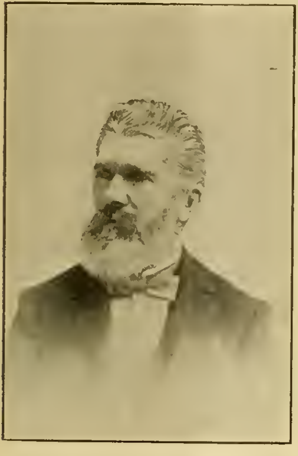
AMERICAN BEE JOURNAL

AGRICULTURAL
COLLEGE

43d Year. CHICAGO, ILL., APRIL 9, 1903. No. 15.

Some Officers and Directors of the Ontario Bee-Keepers' Association.

(These engravings are used here by the courtesy of the Canadian Bee Journal.)



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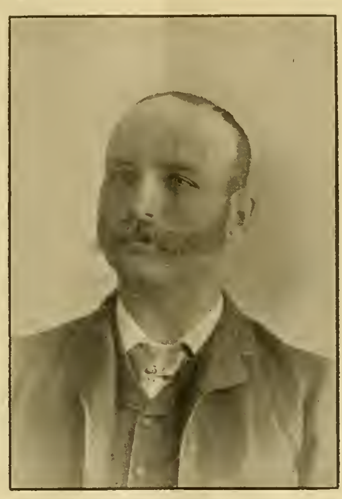

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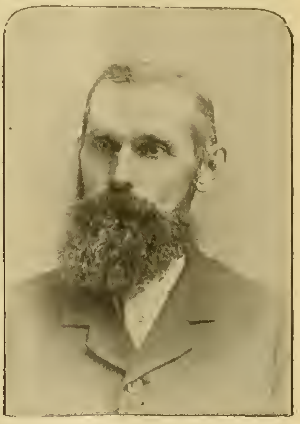

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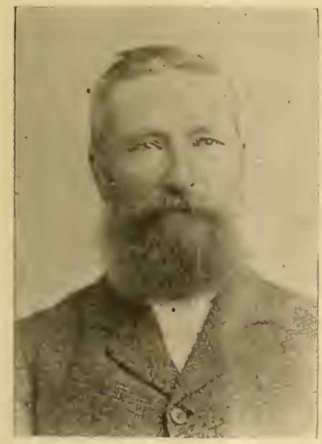

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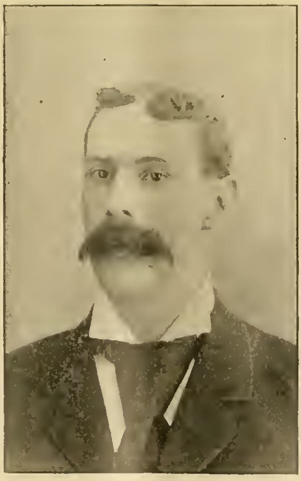

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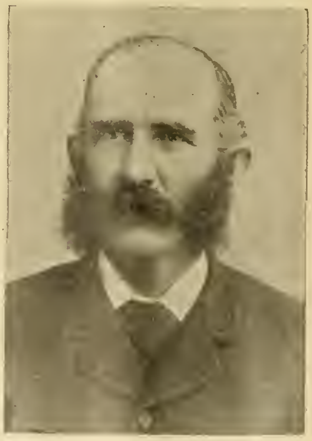

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GEORGE W. YORK.

DEPT. EDITORS,

DR. C. C. MILLER, E. E. HASTY, EMMA M. WILSON

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AMERICAN BEE JOURNAL

THE OLDEST BEE-PAPER IN AMERICA

43d YEAR. CHICAGO, ILL., APRIL 9, 1903. No. 15.

Editorial Comments.

Spraying Fruit-Trees in Bloom.—Geo. W. Stoneman, of Door Co., Wis., wrote us as follows March 28:

> MR. EDITOR:—I now come to you in trouble, asking for help, if such is possible. I am living in a fruit-growing district, and must say that last season my apiary was badly damaged, caused from fruit-growers spraying while trees were in bloom.
>
> I do not think our bee-papers are half as sincere on this matter of spraying as they should be; it is very seldom we see anything in them in regard to it. If we bee-keepers try to tell the fruit-growers that they are killing off the bees that fertilize and carry the pollen from blossom to blossom, they will simply say, "O pshaw! I have been told by good authority that the wind does the fertilizing."
>
> So what can we do to stop this spraying while the trees are in bloom? Is there not some printed matter that could be distributed among them to teach them otherwise? Even our nurserymen recommend spraying while in bloom. Now, what do you think we had best do? They will have to be taught otherwise, or we will have to go out of the bee-business. GEO. W. STONEMAN.

This is no new thing. Every spring the Bee Journal has for years had quite a good deal to say on this subject. How any regular reader can charge the bee-papers with being insincere in this matter is more than we can understand.

Several States have laws enacted against spraying while in bloom, notably New York. We believe that no intelligent fruit-grower nowadays advises spraying while in bloom. The time to spray with poisonous mixtures, in order to get best results, is just before and just after the blossoming period.

The National Bee-Keepers' Association has issued a pamphlet or two on this subject, we believe, which will be mailed free on request by addressing the General Manager, N. E. France, Platteville, Wis.

Every bee-keeper should be a member of the National, and then when anything of this kind comes up, he would feel at perfect liberty to appeal to the General Manager for any aid that the National Association could give. The annual dues are only one dollar, and can be sent to this office if more convenient, as we are the Secretary for this year, and one of our duties is to receive dues of members. The General Manager is the Treasurer of the Association, and he also receives dues.

We hope that every reader of this journal will at once become a member of the National, if not already on its membership roll.

Sampling the Incoming Nectar can be done in the following way, according to A. C. Miller in the American Bee-Keeper:

> "With the thumb and forefinger grasp an incoming worker by the wings; with the second finger of the same hand, push against her abdomen near the end, but just above the sting, and at the same time place a finger of the other hand against the worker's mouth. The nectar will flow out upon it and taste will readily determine the source from whence it came. If the novice is afraid of pushing on the sting, let him 'set' the worker down on the hive-cover."

Starters Used in Forced Swarms are pronounced "pernicious in the extreme" by W. K. Morrison in Gleanings in Bee-Culture, because of the amount of drone-comb that will be built. He not only thinks full sheets of foundation better, but prefers full combs to either, saying, "If combs are not available, use full sheets of foundation." If with fully drawn combs there is any trouble about going up into the sections, he advises shallower frames.

Taking Brood from One Colony to Help Another.—One of the things as to which a caution needs to be given each year to the inexperienced is with regard to taking one or more frames of brood from one colony to give to another. Here is a colony that is really not a colony, but a nucleus, and a weak nucleus at that. The beginner is likely to say:

"That little thing doesn't amount to anything as it is, but if I take a frame of brood—perhaps better two or three frames of brood—from one of my strongest colonies and give to this weakling, I will then have two colonies instead of one."

Certainly it looks reasonable to believe that two colonies are better than one; but things are not always what they seem. That weakling, even after you have given it two or three frames of brood (and if you give it as much as three frames the likelihood is that a good share of the brood will be chilled), is still not in condition to make good growth, while the colony from which the brood was taken has had a setback from which it will not readily recover.

There would be a good deal more wisdom in uniting the weakling with a strong colony. If that is not thought advisable, then let the weakling alone. After a colony is strong enough to fill six or eight Langstroth frames with brood, it is time enough to think of drawing a frame of brood from it, and even then it may be the better way to leave it intact and give it a second story. It is the strong colonies that make the rapid increase in building up, and 12 frames of brood will be increased to 16 a good deal sooner in two than in three hives.

Then when it is thought best to draw from the very strongest, let it be to help, not the weaklings, but those that are next to the strongest, always helping the *strongest* of those that are weak enough to need help.

Cuban Honey Competition.—Arthur C. Miller, in the Rocky Mountain Bee Journal, expresses the belief that there is little to fear from the importation of Cuban honey, and adds:

> Furthermore, it is not the competition of aliens, but of Americans who are sojourning in Cuba—brothers with whom we have worked side by side. Shall we slam the door in *their* faces? Shall we remove about all that makes their life in those surroundings bearable? It is not the Cuban's honey, but the American's honey, that you are crying against, and it is just as reasonable for those States producing little honey, and which sells at high prices, to ask to have Colorado, or Texas, or California, honey kept out of their borders, as for all of us to ask that our brother's honey be kept out of the American market (unless it pay a high tax) because it was produced in Cuba.

To this the Editor replies:

> When Americans make use of the resources of an alien soil to compete in the markets of their countrymen, to all intents and purposes they become aliens, and they should be regarded as such.

Some others might say that not only should we give the cup of cold water to those of another State, or our citizens in another land, but to our brothers born on foreign soil as well.

Formalin for Foul Brood.—C. H. W. Weber writes thus in Gleanings in Bee-Culture:

> MR. ROOT:—Fulfilling my promise made you some time ago, to inform you of any future developments regarding the cure of foul brood by means of formalin gas, I now hand you the final report of Prof. Guyer, of the University of Cincinnati. The combs mentioned in his report were sent to me to experiment with, by friend bee-keepers. After fumigating them I sent them to the Professor, with the request that he endeavor to find signs of life; but, as he says, he could not. Following is his report:
>
> "Seventy-five tests for foul brood in bee-comb. Tests were as follows: Forty tests on comb which had been subjected to formaldehyde-culture, medium-agar at 37°C; 10 tests on comb containing honey treated as above; 15 tests on comb as above culture, medium boriellon at 37°C; 10 tests on comb (foul brood) not treated with

> formaldehyde. Bacillus alvei (germ of foul brood) was found in the comb *not subjected* to formaldehyde; none was found in the combs which *had been treated* with formaldehyde."
>
> This establishes beyond a doubt that formalin gas is a sure cure for foul brood; and I hope that bee-keepers who are unfortunate enough to have colonies afflicted with this disease will give the new cure a trial.

To this Editor Root replies as follows:

> I do not feel so certain myself that formalin gas is an absolute sure cure; but the experiments thus far conducted by Mr. Weber give us great reason for hoping that we have something here of more than ordinary value. *If* we can treat diseased combs by so simple a plan as this, we can wipe foul brood out of a yard with very little expense or trouble.

For years it has been claimed in European bee-journals that this or that drug could be successfully used in treating foul brood, and a very few in this country have been of the same belief. For some reason cases of successful treatment in this country have not been reported with the same frequency as in Europe. Some have claimed that a reason for this lies in the fact that in Europe the disease has to some extent run its course, while in the fresher fields of this country it appears with emphasized virulence.

Editor Root has uniformly insisted heretofore that no drugging could be relied on. Is our esteemed cotemporary not going a little too far to the other extreme when he says, "*If* we can treat diseased combs by so simple a plan as this, we can wipe foul brood out of a yard with very little expense or trouble?" The use of formalin, *if* it is as successful as claimed, will enable us to save our combs and honey; will it do anything more? It will not save the brood. Will it do anything more than to put the trouble of disinfecting the combs in place of the trouble of burning them? Even that, however, will be an important gain.

Winter Losses in the West seem to have been severe. The Rocky Mountain Bee Journal says:

> Our reports from the Western slope indicate that the loss will be large, due to the severe cold weather and depleted vitality of the bees. Denver bee-keepers estimate that the average loss in their locality will amount to 50 percent. In northern Colorado the loss is above normal, but not so severe. We have no reports from the Arkansas valley.
>
> It is too early yet to make a reliable estimate of winter losses. There are colonies that now give promise of survival that will not reach the first of May, unless the spring is extremely favorable.

Convention Proceedings.

Chicago-Northwestern Convention.

Report of the Chicago-Northwestern Bee-Keepers' Convention, held in Chicago, Dec. 3 and 4, 1902.

BY OUR OWN SHORTHAND REPORTER.

(Continued from page 214.)

PICKLED BROOD.

"Is pickled brood ever ropy?"

Dr. Miller—No.

Mr. France—I agree with Dr. Miller on that. I never knew pickled brood to be ropy, neither do I believe that pickled brood will ever develop into anything else.

Dr. Miller—It will string a little bit, won't it?

Mr. France—No, it never gets ropy.

Dr. Miller—Won't it draw out a little bit?

Mr. France—There may be a stage at which it may be drawn out a little—elastic; but it is only a matter of a couple of days.

Pres. York—Is it contagious?

Mr. France—No, sir.

EXTRACTING-SUPERS.

Mr. Clute—How many prefer the large extracting super? How many prefer 16 and 20 frame extracting supers instead of 8 and 10?

Mr. France—I think that hinges largely on the locality.

Dr. Miller—Wouldn't it also depend largely on his apiary? If he had only two colonies he wouldn't want a 16-frame extractor—I beg pardon—super.

Mr. Niver—How do you use 16 frames in an extractor?

Mr. Clute—My 16-frames are expanded by a piece on top that allows the 16 frames to go crosswise of the whole.

Mr. France—I see that Mr. Niver is not understanding Mr. Clute in regard to that. As he came back from Cuba he explained this hive to me. The hive-body has a little projection so that the other set of frames, the extracting frames, go crosswise, and the length is sufficient. When you put the full length in there you have about 18—some of mine I have 20. The idea came from Mr. Coggshall, who uses them very largely. You are getting extracting combs, two sets in a one-story hive. They are in the next tier to the brood. Now, during extracting I like that style of hive. We can take off honey faster in that than in any other hive I have ever seen.

Mr. Clute—The plan didn't come from Coggshall. It is the same as the 8 and 10 frame hives. I have a cut of the hive here, which I will be glad to explain.

LONG-TONGUED BEES.

"Has this season's test proved any superiority in the long-tongued bees?"

Pres. York—I think the man who has the long-tongued bees is not here, as I hear no answer to the question.

LAYER OF AIR OVER SECTIONS.

"Is a layer of air over sections usually filled with bees? and will more honey be stored on that account?"

Pres. York—It seems to me that Dr. Miller was the man who talked about "a layer of air."

Dr. Miller—I think it is usually filled with bees. I don't know whether more honey will be stored. I know if there isn't air there, there will be bee-glue there. In other words, with "a layer of air," as he calls it, when that layer of air is there the bees will come in there, but they will not put bee-glue on a surface as they will in a crack or an angle. Wherever a bee can pass through itself, it thinks—at least I understand it thinks so—that there should not be a crack there big enough for anything else to go through, and they will plug that full of bee-glue; but having the space there for them to get through, they may furnish a little bee-gule, but it won't be anything like the quantity they will put there; so I will say the advantage of the bee-space is not that you will get more honey, but you will get less bee-glue there with that space than without it.

Mr. Baldridge—How much space would you use?

Dr. Miller—About a quarter of an inch.

Mr. Baldridge—Do you ever use an inch, or an inch and a half?

Dr. Miller—Yes, I have had in some cases, though perhaps not intentionally.

Mr. Baldridge—A few years ago Mr. Root made a good many hives with a cover and 1½ or 1¾; and a man shipped me a car-load of hives once, and he had mats with them. I didn't use them, though; I threw them away, and that left a space of 2½ to 3 inches above the frames, and I found it very desirable, and I wouldn't object to-day to having a cover made leaving an inch or 1½-inch space. Some say they will fill that space with comb and honey. I have had that done, but that I consider a great advantage; I am ahead so much, and, besides, it is an indication that they need more room.

Mr. Craven—I will ask Mr. Baldridge if any burr-combs were built?

Mr. Baldridge—Where the space is shallow, but I have found it very desirable. The bees belonged to Mr. Flanagan. I had a car-load of them. Frequently I used to find them full of young bees when I would take the cover off, especially after they were on the hive for a while. I took the cover to any colony to strengthen them. All young bees, nearly.

Dr. Miller—I would like to ask whether Mr. Baldridge considers that irregular comb—for, of course, that would be irregular comb built in that space—whether he considers it more desirable to have that there than in the sections?

Mr. Baldridge—Well, of course, the comb would be built irregularly in that top cover, but they wouldn't attach it to the frames.

Dr. Miller—No, that is not the question. Do you consider it is more desirable to have that irregular honey up there than to have it built in sections? Do you think that that irregular honey built there is so much more than they would have stored if they hadn't had that?

Mr. Baldridge—Yes, sir; and I am just so much ahead

Dr. Miller—Well, I just think you are mistaken. [Laughter.] Now, I want to say to you that I have very great respect for Mr. Baldridge. He was keeping bees and mastering the art when I was trying to find out what diseases they had when I heard the noise of the quaking down in the bottom, and Mr. Baldridge has been in the business long enough to teach us.

Mr. Baldridge—I will say this: I seldom find bees working in that cover unless they were lacking room below, and that's why I say I am just so much ahead, that if it hadn't been there they would have put it in the broodnest. I was producing extracted honey.

Mr. Horstmann—It is not safe to try that plan. After a meeting of this kind we almost always work on the plans spoken of during the convention. I am sure the bees will put that full of comb before going into the super. If you raise the hive up they will build below the frames. It may work all right in Mr. Baldridge's location, but not here.

Dr. Miller—Please let us have clearly before us that Mr. Baldridge is talking of extracting-combs. I haven't any doubt, although you would have two inches of space over extracting-combs, and the bees would have to be crowded a good deal for room before they would put an ounce in there. It takes quite a little bit of crowding to get them to work in a space of 1¼ inches, and you have to take two inches of space over there and give them plenty of comb to fill in for extracting, and you won't be troubled much with irregular combs.

Mr. Horstmann—I am satisfied that they won't work up there if they have extracting-combs to work on. We are producing comb honey. If any one is working for extracted honey, and he likes that space, I believe it would be all right.

Mr. Whitney—Mr. Baldridge, do you apply that principle even to the slightest space above sections?

Mr. Baldridge—I would. In the sections I would add bait-combs, and in this cover there is nothing to entice the bees to commence until they are full. They won't commence to work there until they are crowded.

Mr. Whitney—I should think they would soil the sections.

Mr. Niver—Mr. Chairman, I am responsible for this quarrel, though they get a great deal more honey by leaving a bee-space above the sections. I quarreled with him because the sections were all stained on top, and they always will be. He said he got so much more honey when he filled that bee-space with bees when they get to work. I always believe in the enamel cloth, so the bees can get on top there. All this machinery they get up for sand-papering on top is bosh. With the enamel cloth the bees can't touch the sections at all.

Mr. Purple—How does it tier up?

Mr. Niver—We have all our supplies made with that idea. We have a skeleton honey-board so the bees can not possibly touch it, whether we tier up or not. That point of putting up more honey because you have an air-space filled with bees, I want to find out.

An adjournment was then taken to 6:45 p.m.

(Continued next week.)

Contributed Articles.

Present Status of the Pollination Question.

BY PROF. A. J. COOK.

THE urgent request of a subscriber, enforced by our Editor, leads me to present this important question in the light of the most recent research.

The experiments of Mr. Waite, made nearly 10 years ago, with mine made soon after, and the more recent work of Prof. Fletcher, settled beyond question the following facts:

Many if not all varieties of our fruits that bear seeds must always be pollinated to grow at all, and all to produce seeds. Most, if not all, require—some possibly always, most, if not all, at times—cross-pollination to set a full crop of fruit. As some one has stated, Nature seems to abhor close-pollination. Some plants, like the cereals, and grasses, are fertile with their own pollen. Nearly all our fruit-trees need the invigorating effect of cross-pollination to produce a maxium yield of fruit.

The way these experiments were conducted was to cover the blossoms with netting just before the blossoms opened. This netting was so close in its meshes as to preclude the entrance of even the tiniest insect. The blossoms were kept covered unil they wilted and fell. This, of course, kept away all insects—the great agents of cross-pollination. It was found that in many cases, of pears, plums, prunes, etc., there was no fruit at all when the blossoms were covered. Often, while there was some fruit, there was a very limited crop. In some cases, as with Royal apricots, in my case the covering seemed not to diminish the crop at all; in fact, I secured more fruit from the blossoms that were covered.

It might be objected that the covering, and not need of insect visits to insure cross-pollination, was the cause of the fruit failing to set. In my case this could not be. In more than one instance, where the bees were thronging the blossom-crowded trees, I unwrapped the netting and permitted the bees to visits flowers, after which I at once restored the screen. I marked the blossoms visited, and these, and no other, fruited. In one case, of Kelsey plum, it is very interesting; every fruit that the string-mark showed had been visited by bees developed, and no other.

These experiments show clearly that the screens are no bar to setting and development of fruit; and sustain the view, with emphasis, that cross-pollination is essential in many cases to a full setting of fruit, or even to the development of any fruit at all.

The cases of fruit failure, where there are no bees, or a scarcity of bees in the orchard, and when fruiting was markedly increased where an apiary was secured within or close beside the orchard, are becoming so common in California that there is in many sections an anonymous acknowledgement of the need of bees in the orchard by the orchardists themselves. Indeed, in many cases of trees blooming profusely, each season, and yet setting little or no fruit, there is probably one of two explanations that will always, or nearly always, meet the case: Either there are too few insects (bees are the main agents), to do this necessary work of cross-pollination, or else there is only one variety of fruit-trees that blossom at the time in the orchard. Many orchardists in California have become clearly convinced of the wisdom—yea, the positive necessity—of mixed planting of varieties that blossom at the same time, if one would secure the largest returns.

It will be remembered that a Mr. Smith, now deceased, of one of the Lake Erie islands, was a bee-keeper and also a fruit-grower. He frequently wrote for the American Bee Journal and Gleanings to the effect that bees were not necessary. The islands had no bees, and yet the orchards were immensely productive. Others have orchards of only one variety—Bartlett pears, for example—and yet secure large crops. They, of course, question the importance of cross-pollination. The facts of such persons are undeniable; their conclusions are not at all warranted. There is conclusive evidence that crossing among both animals and plants give added vigor. In fact, the origin of sex in both plants and animals is to be accounted for on this principle of added vigor consequent upon inter-crossing. The Bartlett pear will often produce full crops with no other variety near. It is probable that in all such cases the environment and all the circumstances are propitious, that the trees are in great vigor, and are as a result fertile to their own pollen. It is equally well established that any unfavorable change of season, any lessened care, or untoward circumstance, may enfeeble the trees, and they will become entirely sterile to their own pollen. We can easily believe that trees on the fertile limestone soil of the Erie islands, bathed by the moist lake winds, and abundantly watered by the copious rains incident to the region, would be at a maxium of vigor, and would very probably be self-fertile. I have no hesitancy, however, in asserting that such trees may at any time become barren, unless other varieties are hard by, and unless bees are in the near precincts to act as the needed "marriage priest" to effect the needed cross-pollination.

We must not forget, then, that while it is always wise to mix varieties, and secure the near proximity of bees, yet in rare cases trees—probably those in fullest thrift and vigor—will bear well, even by themselves, and with no insects to bring to the stigmas the pollen from the flowers of other varieties.

One other fact should be borne constantly in mind: In nature, trees and bushes are more scattered—an acre will usually have hardly a score of a kind, and contiguous acres will often vary greatly in their species. Thus the limited number of nectar-loving insects in Nature are sufficient to do the pollinating work. In our orchards it is different. A hundred trees, and even thousands of bushes and vines, often are crowded on a single acre. Many of these bloom in the early spring-time, when insects are few and far between. Here, then, we must supplement the agencies of pollen dispersion. Bees, fortunately, are just to our hands. Each hive pours forth its thousands of these little flower-lovers. And even in spring-time they crowd the blossoms of shrub and trees. Thus, without artificial crowding of trees and shrubs, we must likewise arrange for supernumerous agents of pollen dispersion. We find these abettors in our bees, each apiary sending out not infrequently millions of bees to engage in the transfer of pollen from flower to flower. These facts then are settled :

1. Cross-pollination is usually needed to secure full fruiting.
2. Occasionally very vigorous trees or plants are fertile to their own pollen.
3. Seeds can never be produced without pollenization.
4. Rarely trees will bear fruit (seedless fruit) without pollen. The navel orange is an example.
5. Insects are necessary to cross-pollinate the bloom.
6. In the crowding of varieties as we do in orchard culture, we need more than the native insects, and in such case the honey-bee is the only available agent.
7. The wise orchardist will always mix varieties in his orchard, and will look to it that abundant bees are always near by at time of bloom.

Los Angeles Co., Calif.

Queen-Rearing—Gallup vs. Alley Methods.

BY ARTHUR C. MILLER.

"AND the pot called the kettle black." Dr. Gallup and Mr. Alley are on the point of coming to blows, and all because each is sure he is right, and that the other is wrong. But they are both right and both wrong. The man who steps between two combatants generally gets his own head broken, but even at the risk of that I will step in here and see if I can throw a little light on the subjects discussed—if one can call assertions and counter-assertions discussions—and stop the "scrap."

I have forgotten who began it, but I think it was Dr. Gallup's article on "umbilical cords." Granting that, I will try first to show the Doctor wherein he is wrong, and where he has been taking effect for cause.

I suppose the Doctor is familar with the metamorphosis of insects, but for the benefit of those who may not be I will state that no such thing as an umbilical cord is known to exist in the insect world. The larval bee during its growth casts its skin several times, and not only its skin but the lining of the alimentary canal. It will be seen from this that any umbilical cord connecting the larva with the food or cell would be cast off on the first moult. Besides this, there is no need for any such "cord" for assisting the nourishment of the larva, for not only does it take food with its mouth but it likewise absorbs it through that portion of the skin lying in the food. After the cell is sealed the larva spins its cocoon, the silk coming from an opening in the lower lip. When the spinning is complete the larva casts its skin for the last time, and it is this last *cast with its silken attachments* which the venerable Doctor has mistaken for an umbilical cord. It has nothing, and can have nothing, to do with the nourishment of the larva.

I am sorry to take this prop from the Doctor, and I fear it will embarrass some gentlemen who have been claiming it as a great virtue of their queens.

The Doctor quotes from Prof. Cook in support of his contention, that the best queens are reared in strong colonies, but neither the Doctor nor the Professor tells us *why*. To be sure, the Professor does say : "As the *quantity and quality of the food* and the *general activity* of the bees are *directly connected* with the *full nourishment* of the queen-larvæ, and *these only at the maximum in times of active gathering*—the time when queen-rearing is naturally started—we should also conclude that queens reared at such seasons are superior." (My italics). Dr. Gallup says that only in big colonies can good queens be reared, and only in such colonies are cells containing the "umbilical cord" produced. Dr. Gallup's description of a big colony conveys the idea of a *minimum* of 20 Langstroth frames (or the equivalent) covered with bees. Now, Mr. Doolittle, whose queen-rearing colonies at a *maximum* are equal to but a half of what the Doctor considers safe, says all his queen-cells show the "cord." Surely there is a "missing link" hereabouts. But never mind, for it is not the size of the colony that tells the story, nor the "general activity of the bees," to which we must look for an answer to the riddle, but the *constitution of the colony*, and it is just here where the Doctor's naturally big colonies win.

The feeding of all larvæ is, under normal conditions, attended to by the young bees, and a big (naturally big) colony has an abundance of these. Now if we are to talk of rearing a lot of queen-cells under the supersedure or swarming impluse, simultaneously with care of the worker and drone brood, such a colony will and can do it perfectly. But to assume that such a colony without any brood to care for, is necessary to the production of 10, 20 or 100 cells, is an absurdity. The Doctor has so mixed his subjects that I am unable to decide whether he is talking of rearing queens commercially by his plan, or simply of the ordinary succession of queens in swarming.

Mr. Alley was writing of commercial queen-rearing, and as I have several times visited his apiary in the height of his queen-rearing season, use his system myself, have tried all known plans, and know the *laws* governing successful queen-production, and that Mr. Alley's system conforms to those laws, and that I neither rear queens for sale nor am under any obligation to Mr. Alley (though I believe he has given me two queens), I believe I am in a position to make an impartial statement of his side of the case. The "laws" governing the production of queens I have given in a previous article, so in this place I will only try to show why a few bees of proper age are sufficient for "growing" a *proportionate* number of cells.

From experiments, which as yet are by no means conclusive or exhaustive enough to warrant positive statements, I believe that one bee (nurse-bee) can and does supply food for several worker-larvæ. Now is it "away off" to believe that a pint of nurse-bees (1600, Root's figures) can properly and successfully rear *one queen* and at the same time feed two or three hundred worker-larvæ? These are the conditions under which Mr. Alley's nuclei rear queens when he fails to give them queens. Queens thus reared I have seen at the head of just such colonies as Dr. Gallup describes. But Mr. Alley does not depend on his little nuclei for rearing his queens ; it is only by chance that now and then one has the opportunity to rear a queen. He starts his cells in "full colonies," so far as bees, honey and pollen are concerned, but destitute of brood except for the prepared strips for queen-cells. For cell-building colonies he selects those particularly strong in young bees, and he goes even farther. After the cells are well under way he takes them from the starting colony and gives them to a colony having lots of hatching brood as well as unsealed larvæ—one from which the queen was removed twelve hours previously. By this method he gets his cells superabundantly stocked with food, and the resulting queens attest the value of the system.

To revert to the quotation from Prof. Cook. He lays stress on the conditions of honey-flow, weather, populousness of colony, etc., saying that the best queens can be reared then. Certainly, *because* nurse-bees are then very numerous. Many bee-keepers grasping the conditions only so far as stated by Prof. Cook, have assumed that feeding the cell-building colony will accomplish the desired end. They have entirely missed the point. The feeding must be done in time to cause the rearing of a lot of young bees, and *these* are to do the work.

A word in regard to nuclei and I will close : First their size must be governed by temperature ; that is, locality and season of the year. Mr. Pratt succeeds with very small ones ; Mr. Alley who is close to the coast has them twice the size of Mr. Pratt ; and a friend nearer the Canadian line uses them a half larger than Mr. Alley's.

These diminutive colonies must be regularly fed if their success is to be ensured. For this Mr. Alley uses sugar syrup. Honey must never be used. If a nucleus becomes too populous he exchanges a frame of brood and bees for an empty frame, the removed frame going into one of the stock colonies he uses for making nuclei. Sometimes he accomplishes the same thing by moving the nucleus to another spot, being careful not to do this when it is likely to cause the loss of a virgin queen.

If the bee-keeper will take the trouble to learn exactly what Mr. Alley's nucleus system is—its simplicity, its cheapness and its mobility—they will adopt it, only varying the number of combs in the nuclei to fit their climatic conditions.

If all hands will stop mud-throwing and turn to and look for the *why* of things, the apicultural press will be more interesting than ever before, and bee-keeping will fairly jump forward.

Providence Co., R. I.

Why Feed Bees Sparingly and Often?

BY C. P. DADANT.

A FEW letters of enquiry received by me since the publication of the article about spring care of bees, on page 149, have shown me that some of the beginners do not understand the reason why the bees should be fed sparingly and often, to stimulate spring breeding. This is an important matter, and I believe it should be elucidated as fully as necessary.

When the bees are not harvesting anything in the fields, they are comparatively quiet. The breeding takes place, as the warm days come, but is not pushed with much vigor until the blossoms begin to appear and a little nectar is found. Whenever they begin to find nectar, there is more stir in the hive. The bees that come home from the field, instead of depositing it in the cells, often hand their load to the young bees, so as to be able to get off to the field again. Thus a number of bees are carrying about. Whenever one of them meets the queen, she respectfully and deferentially holds her proboscis towards her and offers her a taste. Being oftener solicited to eat, the queen consumes more honey, and her eggs are matured more rapidly. So, during a honey-flow, no matter how light it be, the queen's breeding increases until the fatigue of a protracted laying puts an end to her prolificness.

The doings that I have just mentioned may be witnessed daily in an obervation hive, made of one single comb, with glass on both sides. Such a hive is very useful to learn the habits of bees. You may read of such things in books or in the journals, but they do not impress themselves upon your mind when you read of them as they will if you are an eye-witness to the details of the hive-life. With such a hive, you have a source of endless information and amusement. You can see the actions of the bees when returning from the fields, the nursing of the young, the laying of the queen, the respectful care which the bees take of her, their sorrow when she is taken away, their labor to replace her, the rearing and hatching of both bees and queens, etc. An observation hive ought to be kept at least for a portion of the year, by every one who is desirous of becoming fully informed as to the habits of the bees.

If the bees are fed sparingly and often, there is a constant carrying about of nectar, the queen is offered food often, the bees are stirred up and create more heat than if quiet, and the result is a greater amount of brood produced. If the feed is given in large quantities, all at one time, for the entire season and to enable them to reach the honey crop in safety, it will, of course, have a good effect, but will not be so advantageous as the same amount given at different times. The bees will store it away to use as is needed, but, a few days after feeding, they will be back again to a quiet condition, unless the flowers are appearing. To be sure, if there were flowers yielding honey, I should not think of advising any one to do any feeding. We are only speaking of the days, unluckily too numerous, in early spring, when the bees can find nothing, or next to nothing, in the field. With repeated light feeding, the colony is kept in a stimulated condition, the amount of food consumed will be greater than if the nourishment is given all at one time, but the number of eggs laid will be much greater, and the colony will be strong earlier.

It is not all to have plenty of bees in your hives, you must have them at the right time. If a colony remains weak till the opening of the crop has begun, unless this crop is to be protracted six weeks or more, for it takes 21 days on the average for the worker-bee to hatch, and after that about 10 days more before she becomes an active field-worker; so it is in March and April that we must induce our bees to breed. The March bees strengthen the colony and enable it to rear the April brood on a larger scale, and the latter is in the field just about the time of the opening of the harvest.

The colonies which were fed sufficiently and properly, sparingly and often, during the spring months, are sure to make the good colonies for the harvest, unless their queen lacks in prolificness. Let me cite you an instance of involuntary feeding which will show the help that light and constant feeding gives to a colony.

At the end of the winter in 1902, we had a few hives in which the bees had died, though their supply of honey had been ample. Each of these hives contained several combs heavy with honey. They were cleaned up and closed up, awaiting the proper time to re-stock them with bees. They were very old hives, had been manufactured by us in 1870, and had been in constant use since that time. One of the hives had a very small hole on the underside, in its bottom-board, a hole so small thst only one bee could get through it at one time, and this even with some difficulty. This small hole was discovered by the bees of one of the colonies in the yard and they immediately went to work to appropriate the spoils. We had noticed the bees flying about, a few at a time, but a cursory examination had failed to reveal any trouble, so nothing was done to interfere with them. The robbing of that honey extended over the space of at least two weeks, by the bees of just one hive. It changed the condition of that colony so much that it seemed to have doubled its strength within a month or so, and its crop was about double that of the next best hive in the yard. It had bred its bees at the right time. The robbing of the combs had extended over this long period of time, just because it was impossible for the bees to get through the hole any faster, even their own eagerness being an impediment to their progress, as two or three bees would often try to get in at the same time and interfere with one another's speed.

This is a good instance of the good done by feeding sparingly and often. I would, however, not recommend a voluntary following of a similar course. The bees that become accustomed to this robbing in the open air soon become a nuisance, while the bees that are fed at home in the evening are never led into bad practices unless pilfering chances are opened to them.

It is hardly necessary to repeat what I said before, that feeding should be done with judgment. A colony heavy with honey should not be fed, as it may accumulate too much. A good way to stimulate such a colony is to uncap a few cells of its sealed honey from time to time. The doing of this forces them to handle their honey, and acts in a similar way to feeding. On the other hand, a very weak colony that has but a few handfuls of bees requires but a very scanty feed. Too much will cause its ruin, for it will be unable to take care of it, and the robber-bees from stronger colonies will attack and may overpower this one. The apiarist must examine his colonies often, judge of their strength and their needs, and use care and discernment as to the amount and frequency of feeding to be done.

Hancock Co., Ill.

Association Notes.

Good Advice to Bee-Keepers.

There are many keeping bees in the suburbs of cities, and whose bees are an annoyance to neighbors.

SPOTTING CLOTHES.

This is generally worse the day bees are set out on the summer stands. Bees go only short distances at that date. It is best not to set the bees out on wash-days, but the day following; by the next week the trouble will be over. If they must be set out, and it is wash-day, go to the neighbor who is washing, explain the situation, and offer a present of some honey if she will delay washing one day.

AT WATERING-PLACES.

Always provide abundance of water in several places for bees. Shallow wooden dishes with sloping sides, with a slatted-board float, is a good form of watering dish. Somewhere have some salt, also air-slacked lime where bees can go to. There is something about it bees like, and it will save trouble to supply the bees' demands. If your bees bother a neighbor's pump, go and put a piece of cheese-cloth over the spout and fence the bees out as well as furnishing a strainer for the water. Stock tanks are places of annoyance. Just above the water line on the inside of the tank fasten a 3-inch strip, it will not bother the stock, and will keep the bees from going there. Also see to it that the overflow is so arranged as not to make a mud-hole near the tank.

IN THE NEIGHBOR'S GARDEN OR FIELD.

If your neighbor or his horse are stung by your bees in his garden or field, I find it a good plan to donate some honey, at the same time ask him to do such work on cool days or early mornings. If he is unable to keep the garden clean, then some early morning surprise him by taking your own horse and cultivate for him up to breakfast. Generally one such act will establish such good feelings no farther trouble will arise. I have proven it so.

AT GROCERY STORES AND RESIDENCES IN THE FALL.

After the honey season often bees are a great annoyance at the above places, especially in empty sugar and syrup barrels, and candy shops. Go to those places and ask to place the packages where bees can not get to them. Go to sugar-cane mills and keep the premises cleaned up, and to neighbors' kitchens where bees come in and bother while canning fruit, and ask them to keep the door and windows screened while at such work. Bees do not go where no sweets abound.

IN THE HIGHWAY AND PUBLIC PLACES.

If people or teams are stung in such public places by your bees, it is your duty so to locate the bees, or change the surroundings, that they do not disturb the public. If damage to person, stock or property is done by the bees, the owner is liable for damages; and if it continues may become a nuisance. High board fences, or high hedges are a great help. Even with all possible precaution if bees are near the street the bees at times will bother. Keep out of trouble if possible. Don't get the idea that the National Association can win every case. You must keep within the law if you want protection. 'Avoid conflicts, compromise, and live up to the *Golden Rule.* N. E. FRANCE,

General Manager National Bee-Keepers' Association.

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

Spring Stimulative Feeding—Gnawed Cappings.

1. What is the best time to begin feeding bees in the spring to start them to brood-rearing? Is the middle of March too early?

2. What is the dark brown substance, similar to sawdust, found on the bottom of the hives? Is it the excrements of the bees? ILLINOIS.

ANSWERS.—1. If the weather was such that the bees could fly every day, and there was nothing for them to gather, then it might be a good thing to feed to stimulate brood-rearing, no matter how early it might be. But such a condition does not occur very often, and it may be well, unless one has had a good deal of experience with bees, to let stimulative feeding alone, for it is a two-edged sword that may do more harm than good.

2. Mainly the cappings of combs that the bees have gnawed away during the winter in getting at the honey in sealed combs. Some say that there are also some excrements of the bees mixed with it.

Using Partly-Filled Sections—Hiving Swarms—Shaken Swarms.

1. I desire to use sections again which were placed on the hives last year and not filled out. They are some mussed. Should they be all scraped off nicely, or just set out again as they are?

2. What do you consider the best way to hive a swarm of bees, in a 10-frame hive with all old combs?

3. Can old combs be satisfactorily used with shaken swarms? If so, what is the *modus operandi?*

4. If starters are always used with shaken swarms, will not the old combs accumulate for the moths to regale themselves in? L. S. R.

Ashtabula Co., Ohio.

ANSWERS.—1. If the bees have never put any honey in them, or if they were all nicely emptied out by the bees *last fall,* put them on just as they are. If they were not emptied by the bees last fall, and contain honey, don't use them at all, for almost surely some of the honey left over winter will have granulated, and the smallest amount of granulated honey left in the cells will affect the honey put into them.

2. I don't know of anything different from hiving a swarm on full sheets of foundation or frames with starters. Perhaps you had something else in mind; if so, ask again, and I will try to answer.

3. Yes, some prefer old combs to anything else. Remove from its stand the hive to be operated upon, and put in its place the hive with empty combs. Then taking one by one the combs from the removed hive, shake and brush the bees into the new hive, just as you would if foundation were used.

4. If starters are always used there certainly would be an accumulation of drawn combs, but it would not be necessary to turn them over to the tender mercies of the moths, for they would be melted up—but I should use them.

Hiving a Swarm from a Tree.

Would some of the bee-keeping ladies tell us what they do in case a swarm of bees clusters in a tree out of reach with a pole? WISCONSIN.

ANSWER.—I would keep the wings of the queens clipped so that when my bees clustered in a tree out of reach of a pole, I would pick up my queen and cage her, put her at the entrance of the hive, and go on with my work serenely oblivious to the fact that those bees were in the top of the tallest tree they could find. They might come back at their leisure.

That is, I should generally do that way. Occasionally it will happen that a swarm will come out with a virgin queen, in which case I should take a saw, climb that tree, saw off the limb, and bring them down, if I could reach them. If they were away out of reach on an overhanging branch, out of all possible reach by climbing, and out of reach of a pole—well, it is a big nuisance, but I will tell you what we did do once with just such a swarm. We nailed two long, light poles together, drove a spike in the end of one, and over this spike we placed a long rope, with a stone securely tied in the end; with a good deal of trouble we succeeded in pushing the stone over the limb and down came the stone bringing the rope with it, and we were masters of the situation. We put the hive on the ground under the limb, taking hold of both ends of the rope gave it a lively jerk, and down came the swarm squarely in front of the hive. Part of them made a bee-line for the hive, and part persisted in going back to that limb, and we had to keep up a lively jerking on that rope to prevent quite a cluster from returning to the tree, but we finally got the swarm.

I often think such a swarm costs more than it is worth to get it. I am sure I should hate to be obliged to climb after them all.

Any good stone-thrower might tie a stone to the end of a ball of wrapping-twine and throw it over the limb, then tie the rope to the wrapping-twine and pull it over.

Perhaps some of the other sisters will tell us how they do.

✻ The Afterthought. ✻

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, O.

BEE-FLIGHTS IN WINTER.

It's a better showing than we can often make—but not such a great deal better—that Washington puts up on page 110—two flights in November, none in December, two in January, two in February. We don't usually have it quite as damp as they do (which counts for something), and my bees last winter flew, once in November (three successive days), not at all in December, once in January, twice in February. But then, my worst winter would show no flights at all, and probably their worst would still have some.

MOVING BEES A SHORT DISTANCE.

I think E. F. Atwater, page 116, has a good idea. When you move a hive a short distance it is better than the regulation board set up in front to make every bee that comes out dig out through a mess of grass. Can't help knowing that there has been a change then.

EXTRA COMBS FOR WINTER.

It would be handy when one has extra combs of honey, and bees to go in the cellar that have not honey enough, to put on an upper story containing a heavy comb or two and some empty ones. We have one good witness to the important matter that they fail to find the honey and go up. P. H. Davis, page 111.

BEES CARRYING DOWN HONEY IN THE FALL.

"Nothing succeeds like success." Mrs. Griffith, not minding her 79 years, has succeeded so far in making her bees carry down honey in the fall—has succeeded both with sections and with light combs. Page 120.

LONGEVITY OF DIFFERENT RACES OF BEES.

Some experiment-station work on the longevity of different races of bees is much to be desired. Glad the Texas station has an eye on so important a problem. Hope they will not forget to compare inside the same race, the meanest bees they can get with the best ones they can get. We need proof that poor bees are shorter-lived than others. Page 131.

CARNIOLAN-ITALIAN HYBRID BEES.

As to the Carniolan-Italian hybrid, J. E. Chambers seems to make an enthusiastic report—begin storing surplus when the pure Italians have only got to breeding fairly. This is Texas, we must remember. And as to whether giving our bees a dash of Carniolan blood may not make still worse our present worst evil—uncontrolled swarming—as to that, he is not able to re-assure us much—except he himself has got through two seasons without any serious trouble.

Finding bees over three miles from home by thousands, and that, too, when no dearth prevailed, is a valuable observation. Only in the unusual case when one has bees unlike all surrounding bees is it easy to tell exactly how far bees go. Page 142.

WISCONSIN BEE-KEEPERS THAT HELPED.

So 180 bee-keepers out of 600 would help Mr. France in his move on the legislature—to the small extent of answering his letter. Glad to hear that with some poking up they afterward did much better than that. Page 149.

BEES UNDER GLASS IN APRIL.

Yes, Mr. Dadant, bees with royal abundance of pollen and honey already in the hive, and put under glass in April, ought to boom, and do extra-big things, as yours did. And it is a wise suggestion of yours that glass over the bees won't make the forage outside any more abundant. If they are to depend on that alone, while having very scant store within, 'twould hardly be worth while to "greenhouse" 'em at all. Page 149.

CAUSE OF SWARMING—REARING QUEENS.

Stachelhausen is one whose opinion we respect ; and he thinks swarming is caused by a multitude of young nurses having prepared food in their stomachs and no young brood to feed it to. That's the dominant idea, I guess. Perhaps we shall have to expand it so as to take in as helpers in lesser degree all the other discontents of prosperity. We can note as a curiosity that the nurses don't get what they are after, if that's what they swarm for. A number of days must pass before there will be *any* young brood to feed in the new homes.

Sagacious remark. A queenless colony will rear some sort of a queen even if the conditions are very bad ; but bees over an excluder, where a good queen is below, unless the conditions are somewhere near right they *will not rear* ; and this fact is some protection against worthless queens by that method. Page 150.

Honey as a Health-Food is the name of a 16-page leaflet ($3\frac{1}{2}$x6 inches) which is designed to help increase the demand and sale of honey. The first part is devoted to a consideration of "Honey as Food," written by Dr. C. C. Miller. The last part contains "Honey-Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by every one who has honey for sale. It is almost certain to make good customers for honey. We know, for we are using it ourselves.

PRICES, prepaid—Sample for 2 cts.; 10 for 10 cts.; 25 for 20 cts.; 50 for 35 cts.; 100 for 65 cts.; 250 for $1.50; 500 for $2.75 ; 1000 for $5.00. If you wish your business card printed at the bottom of the front page, add 25 cts. to your order.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

Entrance-Guards and Swarming.

I have been thinking about bee entrance-guards to keep my bees from swarming. If I have a guard on a hive and the bees are swarming, and the queen can not get out, how many times will they swarm and go back into the hive before they go to the woods? or won't they go to the woods at all? What will become of the queen?

MISSOURI.

ANSWER.—Bees don't always act alike, but the general rule would be something like this: When the first queen-cell is sealed the bees will swarm out, and no queen being with them they will return, for a swarm will not go to the woods unless a queen is with them. A day or two later they will swarm again, and the swarming may be repeated several times in the next week or ten days. At the end of that time the first virgin queen will leave her cell, and the old queen will turn up missing, being put out of business either by the workers or the young queen. If the entrance-guard keeps the young queen from taking her wedding-flight, she may, after a time, begin laying, but her eggs will produce nothing but drones.

Shallow Extracting-Frames.

1. Do shallow extracting-frames need wiring?

2. Is it best to use foundation in shallow extracting brood-frames, if so, how wide a strip? OHIO.

ANSWER.—1. Yes, if filled with foundation, unless the foundation is heavy.

2. If used for brood-rearing it is better to have them filled with foundation. If only for extracting a starter half an inch deep may do, the chief purpose being to get the combs started straight in the middle of the frame.

Break-Joint Honey-Board—Paint for Hives.

1. What is meant by break-joint honey-board?

2. I would like to know whether any one has ever painted hives with Avenarius Carbolineum instead of white paint? If so, did the bees accept it? They say mice will not gnaw, or the ants bother, hives painted with it.

3. How does the new Danzenbaker bottom-board and cover strike you? And how do those that have used them like them? IOWA.

ANSWERS.—1. A break-joint honey-board is one made with slats like a wood-zinc excluder with the zinc left out. Instead of having the spaces between the slats correspond with the spaces between the brood-frames, the spaces between the slats are directly over the centers of the top-bars, and that makes it called "break-joint." It has been claimed that with this break-joint feature there were special advantages of importance, but in my own experience I found no such advantage. With thick top-bars and proper spacing I now dispense with honey-boards altogether.

2. I can say nothing about this from personal experience; perhaps others can.

3. The Danz. bottom-board, patterned after the Miller bottom-board, is good. The new Danz. cover is ingenious, and the reversing feature is of value. If, upon trial, it proves never to warp or separate at the joints, it ought to be a material improvement over former plain board covers.

Transferring Bees—Combs a Solid Mass—Good Bee-Country.

1. I am just starting in the bee-business out here in western Washington. I have 8 colonies. transferred them from box-hives or took them from trees, all except one colony, but did not get any increase from the 8 colonies. What was the reason ?

2. In putting them into Langstroth-Simplicity hives, I tied them with strings, as recommended in "A B C of Bee Culture." That is where I made the mistake, as the bees cut the strings, and now the 8 frames are one solid mass of combs, What shall I do with them? I would like to have them in such a shape that I can manipulate them. I have been thinking some of letting them alone until next fall, then put them on straight combs in new hives. How would that do?

3. This seems to be a good country for wild bees. Is that an indication of its being a good bee-country? Last year I went out into an old logging work, and found three bee-trees in less than three hours. I found nine trees in four days. I consider that good work for a novice at bee-hunting. We had a lovely month of February, and my bees gathered pollen for two weeks, off of what some people ca

pussy-willow. It seems to furnish a large amount of pollen for early spring brood. But, March, oh! she is unruly, for snow is 10 inches deep in the woods, so I took snow by the forelock and killed three deer on it.

I like the "old reliable" American Bee Journal, but some of the veterans seem to be in conflict in their ideas, perhaps on account of locality. WASHINGTON.

ANSWERS.—1. The lack of increase might come from more than one cause. It might be too poor a season for swarming, it might be that the transferring was too late, or it might be just possible that your bees are little given to swarming.

2. You will do as well not to wait till fall. Perhaps as good a plan as any is to wait till three weeks after the colony swarms. After that time the worker-brood will be all hatched out, and you can either transfer combs or melt them up.

3. Yes, wild bees are the same as tame bees, and if one does well the other will.

You don't need to send a stamp when you send a question.

Rape as a Honey-Plant.

Is rape much of a honey-plant? Would it be of any use if sown in grain? It is sown in grain to be used for pasture during the fall, and I have understood that the bees work on it. I will seed down some this spring to alsike clover. How would it do to sow rape with it? and how much to the acre?

One of my neighbor bee-keepers, Martin Anderson, had the misfortune to have his bees nearly all drowned while in the cellar. MINNESOTA.

ANSWER.—I have never heard much about it in this country, but in Germany rape is highly prized as a honey-plant, and sometimes bees are hauled some distance to be in reach of rape-fields. I doubt the advisability of sowing with grain, but have no positive knowledge about it, and perhaps some one else may say if I am wrong.

Moving and Purchasing Bees—Transferring—Danzenbaker Hives—Sweet Clover.

1. I have bought a few colonies of bees in box-hives. When is the best time to take them home?

2. In purchasing bees, if you had your choice of 30 colonies in box-hives at $3.00 per colony, how would you proceed to select them?

3. I propose to transfer them to movable-frame hives. When is the best time to do this?

4. Would you advise using full sheets of foundation?

5. Our climate is rather changeable. How do you think the Danzenbaker hive would work by using 2 brood-nests one above the other, and keep the colonies strong? How would it work to slip a super between them when about to swarm?

6. Would you advise the use of Danzenbaker, or some other hive?

7. How is the foundation fastened to the Danzenbaker frames? Is it fastened the same as the Hoffman frames?

8. How do you think sweet clover will do here in central Wisconsin? WISCONSIN.

ANSWERS.—1. You can take them home at any time now. Better now than later when the frames are full of brood and honey.

2. Select those that seem to be the strongest in bees, and not too light in honey, judging of the former by tipping the hives, and of the latter by hefting them. In addition to this, if you can have those that cast swarms last year you will be sure of young queens.

3. In fruit-bloom is a good time, although it is perhaps still better to transfer three weeks after swarming.

4. Yes.

5. The two brood-chambers would be all right if intelligently used, but it is doubtful about the supers between.

6. I should perfer the dovetailed; others might prefer the Danzenbaker.

7. Yes.

8. Finely.

Mating of Queens and Drones—Rearing Queens.

I have several books on bee-culture, but none of them strikes the principal point—they do not point out the way to mate Italian queens to Italian drones in an apiary of blacks or other bees. I am sending to Italy for two queens, one to breed drones, the other queens; although they should be from different sources. I may say I have been looking for a discussion of this question in the American Bee Journal, but it has not turned up. I have 17 colonies and the larvæ will be transferred to artificial cups and cells placed in a Doolittle nursery.

1. Please say how queen-breeders mate queens purely while bees of other "nationalities" are present?

2. Can this be done without entrance-guards, as I have none?

3. Queens are to be hatched in Doolittle nursery-cages, introduced to nucleus 3-frame hives.

4. Please give me the exact diameter across top of wax-cup pegs, on which the cups are to be cast. I can make them, and they look beautiful, but I fear mine is a little too large.

5. Please tell me whether burlap is what we call "American oil-cloth?" ENGLAND.

ANSWERS.—1. They don't; at least not always. For if it is desired to keep a certain kind pure, they do not have any other kind in the apiary. But something may be done toward getting what you want in this way:

Put in the cellar the hives containing the drones and the young queens. After it is too late in the day for other drones to fly, take out the cellared hives, and incite them to fly by feeding. You may be a little more sure of this if the cellaring has continued two or three days. You may also succeed by taking them out in the morning, so as to get them to fly before other drones are out.

2. For the foregoing no entrance-guards are needed.

3. The nucleus hives will be all the more convenient to carry in and out of the cellar, and perhaps you could have in these your drones as well as queens.

4. The numbers 3, 4, 5 will help you to remember the diameters of the different kinds of cells: 3 queen-cells to the inch, 4 drone-cells, and 5 worker-cells. But I doubt it is so important to have the queen-cells of exact size as it is drone or worker.

5. No, they are utterly different, American oil-cloth or enameled cloth being impervious to water or air, and burlap being very open. Perhaps you call burlap "gunny sacking." It is a coarse stuff made of jute, flax, or manila, and is used for very coarse bags, for wrapping around furniture to be shipped, etc.

Success to you in your far-away English home.

Alsike Clover—Shade-Trees.

1. Does alsike clover produce honey the first season after seeding? and does it continue alike each year?

2. Would you advise shade-trees for bees as far north as this?

3. Which is the best honey-producer, alsike clover or alfalfa? WISCONSIN.

ANSWERS.—1. I *think* it yields little or no honey the same year it starts from the seed, and does not live beyond the second year. If wrong, I shall be glad to be corrected.

2. As far north as Wisconsin bees will probably not be injured by the shade of trees, and possibly they are the better for it. However it may be for the bees, I should like it for the benefit of the bee-keeper.

3. That depends upon what place you are talking about. In some parts of the West alfalfa leads, but in Wisconsin an acre of alsike will probably yield more honey than a hundred of alfalfa.

Honey in Unfinished Sections Not Granulated.

I have seen quite a lot lately in the Bee Journal about the honey in unfinished sections candying, and as I have on hand about 150 of them, that I intended feeding to my bees this spring, I took a look at them to-day, expecting to find them all candied, but such was not the case. The honey is just as clear as when I put them away, so I guess the bees will have no trouble to clean them out this spring, as soon as the weather is warm enough so I can give it to them.

Now this seems strange, in the light of the experience of others, and I cannot account for it unless the place where the sections are kept has something to do with it. I keep them as I do my comb honey, in a hall in the second story of my dwelling-house, where the heat from the lower rooms goes up the stairway and keeps them warm. Is there anything unusual in this? NEBRASKA.

ANSWER.—Very unusual, and not unusual at all. It is unusual for honey to be kept in so good a place, but not unusual for it to stay clear when kept in a hot enough place.

Cleome and Other Honey-Plants.

What about artificial pasturage for bees? Is Cleome pungens worth cultivating for the honey alone? Is the honey of good quality? Is it light or dark, and how does it compare with white clover honey? Please give the names of other plants that are good for artificial pasture in this locality and vicinity?

I would be pleased to know if there are works on the above subjects. I have a couple of acres to devote to artificial pasture just for the honey if it is probable that success might come of it in any way.

I am a beginner and will say that last spring I purchased eight colonies of pure, or nearly pure, Italians; the first thing I did was to lose four of my old queens, but with the four other queens and the other four queenless colonies I succeeded in rearing 31, and all are in good shape now—all that I have opened except one have lots of brood in all stages. One hive has about six Langstroth frames, and the others have two to three frames, of eggs and larvæ. We have considerable white clover and sweet clover in this neighborhood. We have quite a bit of marsh-pasture, and some of the yellow flowers (coreopsis), making a good early spring and late fall pasture, especially the yellow for fall. We also raise buckwheat here. WISCONSIN.

ANSWER.—Cleome pungens is not worth cultivating for honey alone. I do not remember to have seen any statement as to the character of its honey, and I don't know whether any one ever secured enough of it to tell just what it was like.

There is probably no work published that treats particularly on honey-plants, although the text-books on bee-culture give some information regarding them. It is not likely that you will find any plant that will yield sufficient honey to make it profitable for you to occupy land with it unless it yields a profit in some other way. Sweet clover will probably come as near it as anything you can find. If stock in your locality have learned to eat sweet clover either green or dry, it will pay to occupy good land with it.

What Yon Yonson Thinks

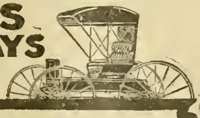
It seems kine of funny how da shook svarming fever spred so fast. It vas yust few cases till las' summer it broke out plenty bad, an before da leavs fall purdneer every bee-keeper had tuch of it; an sum got it plenty bad. Ay tank mebby nex' summer dom goan to shake der bees so dom kant rest. Now, for da big bee-keepers ay tank it vas all rite, but for little bee-keepers lak Yon Yonson ay tank it is better to sow som catnip an sveet clover and plant more rossbers. An den pat dom bees on da back an tell dom to eider fish or cut bait. But not shake dom any more dan nessesary. Ay don't vont to shake dom, or brush dom, or kick dom aroun ven dom iss good.

Som say it is better to drive dom two times, so purty soon ven dom big bee-keepers vont help, dom vil advertise fur feller to help drive da bees. Now, Yon Yonson don't need help to drive da bees to svarm, but mebby nex' summer he goan to need feller to drive da red clover bees to da clover field, an hurd dom so dom don't git to da catnip. Ay tank dat goan to be plenty hard yob, coz dom is yust so crasy fur catnip som anyting vat never vas. My goodness, vy for dom bees svarm for any vay?

If ve know fur shure den ay tank its better ve don't let dom svarm a tall, but let dom yust roll in der hunny.

Now, ay goan to tell you vy for dom bees svarm. In da spring ven dom little bees begin to mak hunny, an dom little grasshoppers begin to mak grass, an dom butterflies begin to mak butter, den da nites is kine of cool, and dom bees don't lak to sleep upstairs, an dom begin to pack avay hunny in da top of da brood-frames, an ven dom git it capped over dom don't lak to go upstairs an vork, so dom keep on crowding der quveens furder down, an purty soon der quveens he git mad, an he call der house to order, an dom hole big meetings. Da young bees vat is use to have play spells, dom lak to have plenty big time, an dom mak moshun to svarm, den da drones vot hang aroun' an don't vork but alvays lak to ete at da first table, dom secon' da moshun, an ven dom vote da drones holler "Eye" so loud dat da moshun is carried. An dom git reddy to svarm. But if dom hole meeting in evening den da old bees is home, an dom vote "No," an den dom send da drones upstairs to bed, outen any supper. An den purty soon dom go to vork an pack avay hunny in da upstairs.

Now, if you don't give dom nuff room den dom crowd der quveens, an da quveens he git mad an dom svarm; but if you give dom upstairs too big, den it is apt to be too cold, an dom don't vas like it, an yust croud der quveens an svarm yust der same; but if you vil yust put on shallow extracting combs, and den ven dom begin to vork in dem, den give dom room yust so faster as dom need it, but if dom begin to croud der quveens den yust uncap der hunny in da downstairs an smoke der bees so dom tak on plenty hunny, an den



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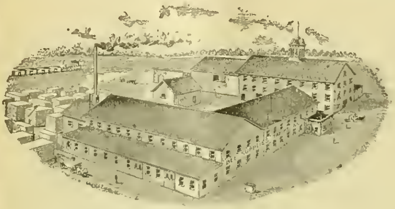

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shut da hive and smoke da entrance so dom go upstairs an unload, den dom soon mak room for der quveens, an' der queens he yust go on packen avay eegs for vinter, an der bees carry deir hunny upstairs, an everyting yust vork lak forty-seven, an dom don't even tank 'bout svarming.

An' if Dr. Miller vill yust try das plan to mak dom tak da hunny from da downstairs and put it in der shallow combs above, an so on, he soon don't haf to run after da vilo-da-vip of da non-svarming bees.

Mr. Baron Lie-plenty-bad, he got noder plan. He pump der quveens full of high life, an den he tie little string vat dom call Pupaskinnæ Castofficæ roun der quveens neck, so he don't vas git avay, an den der quveens he lay more as a million eegs per minit. But ay hurd since dat it ain't so. Mr. Lie-plenty-bad must be awful smart feller, but der quveens got little too much hi life, so he scratch round an vord his feet out, an he hav to git cork legs for him. Ay lak to git von of dom quveens.

YON YONSON.

FROM MANY FIELDS

Feeding a Little Daily.

I am just a beginner in bee-keeping. I had 15 colonies last fall, and have lost 2 colonies this winter. I am feeding the bees a little every day, so as to get the hives full of bees by the time the fruit-trees are in bloom.

JOHN M. BAKER.

Wood Co., Ohio, March 23.

Prospects Not Encouraging.

The prospect for this season is only average, as we have had, up to this date, only half enough rain to insure a crop.

JOHN G. COREY.

Ventura Co., Calif., March 5.

Cleaning Out Partly Filled Sections.

On page 130, Mr. Baldwin says that the Bevins method of getting partly filled sections cleaned out may be all right in theory, but is not practical for two reasons:

1. If the colony is a little weak it is liable to get chilled because too much cold air circulates through the body of the colony.

This may be true of bees in Dupage Co., Ill., but it is not true of colonies of bees here, unless colonies are so weak that it would not be advisable to try to winter them. As a matter of fact, I do not feed weak colonies until I have united so as to have colonies of good strength for wintering.

2. He says that my method does not separate the bees and sections so but that the bees can get at the sections at all times.

Well, I want the bees to have access to the honey in the sections at all times. A thin board, mortised as he describes, may be of some advantage where the autumns are colder than they are here, but the burlap is all right for this locality. I do not see that setting the sections promiscuously on that board has any advantage over my method of arranging them. When sorting my honey in the fall I place the unfinished sections back in the super on the section-holders with wedged follower, and all separators removed. The sections with no scaled honey are speedily cleaned out, and then these are removed, leaving the others far enough apart for easy manipulation. Whether a firmer chisel is better than the uncapping knife, each one must decide for himself. I prefer a clean, smooth cut to any mangling performance. I smiled, not quite audibly, when Mr. Baldwin cited as evidence of the superiority of his method, the fact that he has 400 or 500 sections ready for use next spring. I have more than 1000 sections ready for use next season; in fact, about 50 or 60 twenty-four section supers full.

I have no quarrel with Mr. Baldwin about his method of getting his half-filled sections cleaned out, but write simply to show that my method *is* practical.

Summing up the matter under discussion, this is about the size of the difference between Mr. Baldwin's method and my own: He would use a thin board, with a small hole in one end of it, between the brood-chamber and super, in order to prevent a too-free circulation of air through the brood-chamber. This, I believe, to be unnecessary with colonies of reasonable strength. If not of reasonable strength, I would make them so.

I use a piece of burlap because it allows the heat of the cluster to ascend into the super, and work can go on there at all times, except when the temperature is so low as to compel the bees to cluster on the brood-combs. With a tight-fitting cover on the super there is no circulation of air that will do a fair-sized colony any harm.

My aim is to have the work done as early in the fall as possible. EDWIN BEVINS.

Decatur Co., Iowa, Feb. 27.

Season of 1902—Big Queens, Etc.

Last season was the most honeyless I have known in 55 years of bee-keeping. Rain, rain was the order of the day the whole season. The result was no surplus to speak of, and colonies light in winter stores.

I am not going to say we expect a big crop in 1903, for I have learned by experience that a few big thunder-storms can knock the poetry out of the brightest prospects of a honey crop in double quick.

While writing for the "Old Reliable," I want to propose three cheers for Dr. Gallup and Baron Lieawful. Oh, now, Mr. Editor, I feel so kind of good and happy over the discovery of great minds. Just think of it, the Doctor has discovered a law in the bee-world that like the laws of the Medes and Persians changeth not, and that law is, the larger the hive the larger the queen reared therein; the larger the queen the larger the colony; the larger the colony the larger the crop of honey! Now, let us all strike in on that line and see how soon we can get a queen as large as a yearling heifer! What boots it though we have to build hives like our barn, 30x40 feet.

And then think of the Baron's wonderful discovery, wrought out with such scientific research and mathematical exactness as to seconds of time, and the astonishing results achieved. "O! brethren, the world do move." Let the Doctor give us the big queen, and the Baron the great longevity and fertility, and some other man start a blacksmith shop to keep the queens shod and to splice their antennæ occasionally, and we can set up for bee-keeping!

Some of the older bee-keepers may remember I spoke a few years ago, through the American Bee Journal, of starting in haste for London, England, to secure one of those wonderful queens that were called "Punic bees." I am glad I didn't go. We've got something better.

In conclusion, allow me to say to any queen-breeder who wishes to try the "umbilical cord," I will mail 20 or 30 free of charge by enclosing stamp to pay postage. W. J. DAVIS, 1ST.

Warren Co., Pa., March 5.

Cloth Over Frames—Giving Bees a Flight.

Last season was a very poor one for bees in this locality. It was so wet and cold up to July 15, and then we had some fair honey weather. We got 25 or 30 pounds of surplus honey per colony, and the bees gathered plenty to winter on in the cellar. My bees are wintering finely so far; the thermometer has been down to zero for the past week, 4 degrees was the coldest here.

The coming season ought to be good for bees here, as the white clover made good growth the past season.

I notice some of the bee-keepers advocate the use of cloth over the top of frames; they are probably all right in a dry season. In such a wet season as we had here I do not think they amount to much. I had them on my colonies until the wet weather came, when I pulled them off and put on a ½-inch board cover. The cloth was so wet and damp I could wring water out of it. The bees left the supers entirely and went below where it was dryer, and staid until I put on the boards. How did it work? Fine. I looked the next morning and they were right back in the supers working for me. Probably my neighbors' hives are made so they can not use a board on top. My hives are made so there is ½ inch between the hive and the gable of the cover. The cover sets over the top of the hive and ½ inch down on all sides. This cover, with ½-inch board instead of cloth, makes an air-spaced double cover. They can not glue the board to the sections as they do cloth. The ⅜-inch space underneath keeps the sections neat and clean.

Some say that boards crack and disturb the bees; they don't bother me much that way. I loosen them up carefully with a pocket-knife, blow a little smoke under, and the bees don't bother at all. I find a good plan in handling bees is to smoke your hands with the smoker until they smell quite strong with smoke; if a bee alights on your hands it will not stay long. I never use gloves. I have gone through the season without being stung once upon the hands.

On page 99, I notice what is said about giving bees a flight and returning them to the cellar. I tried that last spring with good success. After the bees returned to the cellar they were quiet, and did not come out of the hive at all. I am waiting for a day to put them out this spring, but we have not had a day when the bees could fly since last November. MANFRED REYNOLDS.

Kalamazoo Co., Mich., Feb. 24.

Foul Brood in Ontario.

A perusual of Mr. Wm. McEvoy's racy and strongly worded article, on page 197, inclines me to offer a word relating to it—just a point or so, and never mind the rest.

He says "the province of Ontario had at one time more foul-broody apiaries than any other Province or State in the world." One can hardly think that Mr. McEvoy had well considered that wide statement before making it. I have always been led to believe that Ontario, Canada, would not suffer by comparison with other countries generally, with regard to healthfulness of all useful animal life. My experience with keeping bees, on my own account, extends over more than 30 years, and during that time I have visited quite a number of apiaries all about me for "several miles," and I do not remember that I ever had the pleasure (?) of seeing one case of foul brood. That Ontario like other countries is subject to the disease no one wishes to deny.

Continuing, he says: "The first season that I went out on my rounds through the Province, I found the disease in every village, town and city that I went into, and also every country place where bees are kept." To make this statement clear, it should be explained that Mr. McEvoy works by the day, and if he were guided by the law that was placed in his hands for his guidance in his official duties as foul brood inspector, he visited, in the main, only apiaries or bees *to which he was sent by the President* of the Ontario Bee-Keepers' Association, and of course the President would send him only to those places where he had reason to believe foul brood existed; and then we might reasonably expect him to find it wherever he went. With the facts before us, it does seem to me that the Inspector is not justified in branding Ontario as ever having been the worst in the world in that respect.

We have reason to believe that certain parties, once prominent in bee-circles, bee-societies and bee-literature, were not as careful as they should have been when selling and shipping bees; and probably a good deal of mischief was done in that way; but did not cover all Ontario.

Can there be any valid reason for hiding the existence of any infectious disease among any of our domestic animals? To my mind, there never yet has been anything offered that had the appearance of a reason. When A. I. Root Co. had foul brood, they told us so, and we believed them, and when it was eradicated we believed what they said about it, and their busi-

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Daughters of Select Imported Italian, Select long-tongued (Moore's), and Select, Straight 5-band Queens. Bred 3¼ miles apart, and mated to select drones. No bees owned within 2½ miles; none impure within 3, and but few within 5 miles. No disease. 30 years' experience. WARRANTED QUEENS, 75 cents each; TESTED, $1.50 each. Discount on large orders.

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PAGE

PAGE FENCE BEING

acknowledged the Standard, why don't some company try to imitate its quality and serviceability?
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10A17t BELL BRANCH, MICH.

ness went right on. If my bees ever have foul brood I want every bee-keeper to know it; the public is interested in all infectious diseases; it has to take its chances of suffering from such diseases; it has to stand the cost of stamping them out, and certainly it has the right to be in possession of all available knowledge touching such diseases in the country. Let's have light.

That Mr. McEvoy worked out—discovered—the best remedy for that dread disease known in this country—that he is probably the best man among us to undertake the work practically alone, very likely no one will deny.

Ontario, Canada. S. T. PETTIT.

Making "Good" Candy, Etc.

The answer to "Ontario," on page 138, in regard to making "Good" candy can be very much improved, to-wit:

Take raw extracted honey and stir into it as much finely powered cane-sugar as you may find convenient; and then on a sheet of tin, zinc, or something similar—not porous—work in some sugar of the same kind, kneading the mass as you would bread, and when you can't knead very readily any more sugar into the "dough," take a hammer and pound in more. Beat in more sugar very much like we old pioneers used to beat the clay to make the jambs of a fireplace, when we could get no bricks. It is advisable to use *only cane-sugar*. I have never been able to make a good article from the other sugars, and it should be free from ultramarine, and as fine as flour. Confectioners' sugar is fine enough, but it is *no good* at all for *good* "Good" candy.

Made as above directed this candy will keep indefinitely, even in our dry Colorado climate.

The past season I used candy thus made that was 7 *years old*. It had been kept in a tin can, with a cover tight enough to keep out red ants.

Candy made by the recipe given on page 138, *may* do very well for shipping queens a short distance—and the shorter the better—but it is not only convenient, but quite necessary, to have better candy for long distances.

When I have been unable to get sugar free from ultramarine and other impurities, it has been my practice to boil, adding a very little water, and skim off the scum that will arise from the boiling, then stir while cooling as long as I can—the longer the better; after cooling it should be solid—break it up and run through a common coffee-mill, and more than once, until it is as fine as flour. If the honey you used is warm, and the weather warm, and you do the work in a warm room, you will do better work and save time, but do not boil it.

J. E. Chambers (pages 142-3) has evidently thoroughly tested Carniolan bees, and talks straight to the point. I have handled them 10 years. They are all right, either North or South, it appears. JAMES H. WING.

Prowers Co., Colo., March 5.

An Experience with Bees.

About 2 years ago I became very much interested in bees, but last season in our section (and I think it was the same in most States) was enough to discourage almost any one who keeps bees, as the season was so wet that the bees could work only about 2 days in a week, and then the days of bad weather would come and they would eat what they had gathered during the pleasant days; and when fall came I found many of them nearly destitute of stores; but I fed them sugar syrup whenever a pleasant day came, but snow came before I could feed them enough to carry them through the winter, and so I put them into the cellar as they were—36 in number—about Nov. 15, and as I live in a very snowy country we have to leave our bees in until about April 15, making about 5 months that they are confined to the cellar, without having a flight. We have over 4 feet of snow here on a level now; it generally stays until about April 1, at which time the weather warms up, and the snow will usually all be gone about April 15, and then the bees increase very rapidly when placed out.

I have taken the American Bee Journal about 2 years, and would hardly know how to get along without it, as I find something very practical in every issue, especially the questions that Dr. Miller answers.

I will give a little experience that I had with a red clover queen that I received last summer. I expected the queen about July 1, but it was August 1 when I received her, and as I had never introduced a queen I took 6 frames filled with brood and some honey, and placed them in an empty hive, brushing every bee off (they were hybrid bees), and closed the new hive; and the next morning there were several bees hatched out of the brood and then I placed the new queen in the hive. I think she was the smallest queen I ever saw, not being any larger than my bees, but she being yellow could easily be distinguished, as my bees are nearly black, and so I watched the hive very closely. In about 30 days the bees that came from the hive were about ⅛ of them the same color as the queen, and by fall there was not one of my bees left in the hive, and it was completely filled with what I now suppose to be red clover bees, but they had very little honey.

I usually look at my bees once a week, to see how they are getting along. Last week when I went to the cellar and opened the above hive I found the colony had died (?) for want of food, which made me feel very badly. I took out some of the frames and shook the dead bees off on the floor in search of the queen, and soon found her dead as the rest. I brought her up to show her to my wife, laying the queen on a small piece of paper on the back of the stove, and in about 10 minutes I looked at her again and she was crawling around, to my surprise. I then went down and brought up the hive and bees, and put it on the back of the stove, where it was real warm, and, to my surprise, the bees all came to life. I at once made some sugar candy for them, and they are doing finely now, queen and all. F. E. CASTLE.

Oneida Co., N. Y., Feb 23.

Curing Foul Brood in Texas.

I noticed an article on pages 796 and 797, entitled, "Bee-Keeping in the Southwest—Cleome and Foul Brood." As no one else seems to do so I will try to help our friend out. As for Cleome, I don't know that I can do him any good; it is a good honey-plant, but I do not think it of value as chicken-feed.

As for foul brood making its appearance in Texas last year, our friend is mistaken; it was here when I began bee-keeping 9 years ago, and when I began to learn something about bees, I found out that my bees were in bad shape with the disease, and I set to work for a cure. I consulted my "A B C of Bee-Culture," and there found a plan and tried it, but in some cases it failed. About this time I got a copy of Dr. Howards' foul brood pamphlet (which our friend should get), and tried the McEvoy treatment, and got out of trouble. Since that time (which was about 4 years ago) my bees have been healthy, and in fine shape.

I have also done considerable work treating foul brood for my neighbors, and the plan I struck was to treat all colonies that are strong enough to take care of themselves, and such as are not, some day after they have quit flying stop the entrance, and be sure they are all

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in L. hives and L. extracting fixtures, or offers, any or all of the following: 1 Foundation Press, 3 Honey-Extractors for frames not over 11x14½ inches; 2,000 four-piece Sections; 1 Bicycle; 1 Furnace and pipe; 1 Base-burner coal heating Stove; 1 Cook-Stove; 1 fur Overcoat (new); and other things. For description, write
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in; slip the cover just far enough from one corner to pour a teaspoonful of bisulphide of carbon. Close the cover, and that colony is "cured" to a certainty. But you must take the contents of the hive and burn or bury, and you must do this when no bees are flying. If you have spilled no honey about, the hive is safe to use again.

It is not so much trouble to cure a colony of foul brood, but to keep from spreading the disease is what you must look out for. If you have a lot of weakened colonies with this disease, never undertake to move the hives close together to strengthen so you can cure them. Just as surely you will spread the disease. It is better to treat all diseased colonies at nearly the same time as possible.

Now, Mr. Garrett, I have given you a plan by which you can cure your bees of foul brood, but you must do your work carefully, and during a flow of honey, and my advice to you is to let the other fellow treat said disease with medicine. I have found that bees do not need much medicine in Texas.

Now if you get what you want out of this, I will try again, if you ask. LON ROSSON.

Ellis Co., Texas, March 7.

To make cows pay, use Sharples Cream Separators
Book Business Dairying & Cat.212 free. W.Chester.Pa

CONVENTION NOTICE.

Missouri.—Bee-keepers of Missouri will meet in convention at Moberly, in the Commercial Club Rooms, at 2 o'clock p.m., on April 22, 1903, to organize a Missouri State Bee-Keepers' Association. We expect to complete our organization on that day and have some bee-talks the day following. Everybody is invited who is interested in bees and honey. Let us have a good turn-out and a good time. Good hotel accommodations can be had at $1.00 and $2.00 a day. The Monitor Printing Company will tell you where the Commercial Club rooms are located. W. T. CARY, Acting Secretary.

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Originators of 30-Day Plan.—In another part of this issue we are printing the advertisement of the Kalamazoo Carriage and Harness Mfg. Co., of Kalamazoo, Mich. These people are the originators of the Free Trial Plan of sending vehicles anywhere with the privilege of 30 days' examination and trial, the purchaser being perfectly satisfied before he accepts the vehicle. This plan was unique in its conception, and a good many dealers thought it was impractical, but the quality of the goods that the Kalamazoo Carriage & Harness Mfg. Co., turn out, justify them in making this very liberal offer, as they manufacture a fine grade of vehicles. Their business has increased very much in the past few years, and any one who is interested in getting really a first-class job at the lowest prices should write to them for their Free Catalog, which is now ready for distribution. Their address is, The Kalamazoo Carriage and Harness Mfg. Co., No 161 Ransome St., Kalamazoo, Mich. Please mention the American Bee Journal when writing them.

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Forty Years Among the Bees, by Dr. C. C. Miller.—This book contains 328 pages, is bound in handsome cloth, with gold letters and design; it is printed on best book-paper, and illustrated with 112 beautiful original half-tone pictures, taken by Dr. Miller himself. It is unique in this regard. The first few pages are devoted to an interesting biographical sketch of Dr. Miller, telling how he happened to get into bee-keeping. Seventeen years ago he wrote a small book, called "A Year Among the Bees," but that little work has been out of print for a number of years. While some of the matter used in the former book is found in the new one, it all reads like a good new story of successful bee-keeping by one of the masters, and shows in minutest detail just how Dr. Miller does things with bees. Price, $1.00.

Bee-Keeper's Guide, or Manual of the Apiary, by Prof. A. J. Cook, of Pomona College, California. This book is not only instructive and helpful as a guide in bee-keeping, but is interesting and thoroughly practical and scientific. It contains a full delineation of the anatomy and physiology of bees. 544 pages. 295 illustrations. Bound in cloth. 19th thousand. Price, $1.20.

Langstroth on the Honey-Bee, revised by Dadant.—This classic in bee-culture has been entirely re-written, and is fully illustrated. It treats of everything relating to bees and bee-keeping. No apiarian library is complete without this standard work by Rev. L. L. Langstroth—the Father of American Bee-Culture. It has 520 pages, bound in cloth. Price, $1.20.

A B C of Bee-Culture, by A. I. & E. R. Root.—A cyclopedia of over 500 pages, describing everything pertaining to the care of the honey-bees. Contains about 400 engravings. It was written especially for beginners. Bound in cloth. Price, $1.20

Scientific Queen-Rearing, as Practically Applied, by G. M. Doolittle.—A method by which the very best of queen-bees are reared in perfect accord with Nature's way. Bound in cloth and illustrated. Price, $1.00; in leatherette binding, 60 cents.

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Advanced Bee-Culture, Its Methods and Management, by W. Z. Hutchinson.—The author of this work is a practical and entertaining writer. You should read his book; 90 pages; bound in paper, and illustrated. Price, 50 cents.

Bienen-Kultur, by Thomas G. Newman. —This is a German translation of the principal portion of the book called "Bees and Honey." 100-page pamphlet. Price, 25 cents.

Apiary Register, by Thomas G. Newman.—Devotes two pages to a colony. Leather binding. Price, for 50 colonies, $1.00.

Dr. Howard's Book on Foul Brood. —Gives the McEvoy Treatment and reviews the experiments of others. Price, 25 cents.

Winter Problem in Bee-Keeping, by G. R. Pierce.—Result of 25 years' experience Price, 30 cents.

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Foul Brood, by A. R. Kohnke.—Origin, Development and Cure. Price, 10 cents.

HONEY AND BEESWAX
MARKET QUOTATIONS.

CHICAGO, March 24.—The trade is of small volume with little change in prices of any of the grades. Choice white comb sells at 15@16c with amber and other off grades slow at 2@5c less. Extracted, 7@8c for white, according to kind and flavor; dark grades, 5½@6½c. Beeswax, 30c. R. A. BURNETT & CO.

ALBANY, N. Y., Mar. 14. — Honey demand quiet; receipts and stock light. Comb selling, light, 15c; mixed, 14@15c; dark, 13@14c. Extracted, dark, at 7@7½c. Beeswax firm, 30@32c. H. R. WRIGHT.

KANSAS CITY, Apr. 2.—Our market is almost bare of comb honey; the demand is good. We quote you as follows: Fancy white comb, 24 sections, $3.50; No. 1, white, $3.40; No. 2, white and amber, $3@3.25. Extracted, white, 6½c; amber, 5½@6c. Beeswax No. 1, per pound, 25c C. C. CLEMONS & CO.

CINCINNATI, March 11—The demand for extracted honey is good at the following prices: Amber, barrels, 5½@6½c, according to quality; white clover, 8@9c. Fancy comb honey, 15½@16½c. Beeswax strong at 30c.
THE FRED W. MUTH CO.

NEW YORK, March 5.—There is a fair demand for white comb at 15c per pound for fancy, 13@14c for No. 1, and 12c for amber, with sufficient supply to meet the demand. Dark honey will be cleaned up with very little left; it is selling at about 11c per pound. Extracted rather weak and in quantity lots, prices generally shaded. We quote: White, 7@7½ cents; amber, 6½@7c; dark, 6c. Beeswax scarce at 30@31c for good average. HILDRETH & SEGELKEN.

CINCINNATI, Mar. 7.—The comb honey market has weakened a little more; is freely offered at following prices: Fancy white, 14@15c; no demand for ambers whatever. The market for extracted has not been changed and prices are as follows: Amber in barrels, 5¼@5½c; in cans 6@6½c; white clover, 8@8½c. Beeswax, 28@30c.
C. H. W. WEBER.

SAN FRANCISCO, Mar. 11.—White comb honey, 12½@13½c; amber, 9@11c; dark, 7@7½c. Extracted, white, 6¾@7¼c; light amber, 5¾@6c; amber, 5@5¼c: dark. 4@4½c. Beeswax, good to choice, light 27@29c; dark, 25@26c.

Demand is fair on local account for water-white, uncandied, but there is not much of this sort obtainable. Market for same is firm at ruling rates. Candied stock and common qualities are going at somewhat irregular and rather easy figures, holders as a rule being desirous of effecting an early clean-up.

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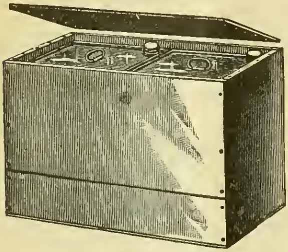

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Special Notices.

Beeswax Market.

We are paying, till further notice, 30 cents cash, or 32 in trade, for average; one cent extra for choice yellow wax.

Three Carloads of Honey-Jars.

We have orders with two factories for 3 carloads of honey-jars to be delivered soon. One car of No. 25 jars and Mason jars goes to our branch in Mechanic Falls, Maine, while another car is coming here. The third car is of square jars also—Tip-top jars. We are getting in position to take care of orders for honey-jars promptly, and at the best available price.

Shipping at this Date.

The orders continue to roll in in good volume, so that we are still 15 cars behind on orders for car-loads. Smaller orders are shipped with reasonable promptness within 2 or 3 days after being received. The railroads continue to annoy by delay to shipments in transit. The consequence of such delays in bee-keepers' supplies are not quite so serious now as they will be later on; and it is of the highest importance that you anticipate your wants as far in advance as possible, so as not to be without the goods when the time comes that you are ready to use them. Two percent off for cash with order this month.

Second-hand Foundation-Mills.

We still have on hand a good assortment of second-hand foundation-mills, which we list as follows. Any one desiring samples from these mills, or further particulars, we shall be pleased to supply on application.

No. 014, 2x6, hex. cell, extra-thin super. Price, $8
No. 037, 2x6, hex. cell, extra-thin super, good. Price, 10.
No. 2132, 2x6, hex. cell, thin super. Price, $10.
No. 2227, 2x6, hex. cell, thin super. Price, $10.
No. 050, 2½x12, round cell, medium. Price, $12.
No. 044, 2x10, Pelham, nearly new. Price, $6.
No. 034, 2¼x12½, round cell, very old style, in fair condition. Price, $10.
No. 051, 2x10, round cell, medium brood. Price, $10

The New Super Springs for 1903.

We have up until lately been using wire springs to produce the necessary compression in comb-honey supers. These were secured to the inside of the super side. There came to be a general demand for a REMOVABLE spring, and we accordingly constructed some samples made of wire; but owing to the difficulties of manufacture, and the further fact that the tension of the wire varied considerably, we finally decided on flat steel springs. This spring is very similar to if not identical with the super-spring first used by Capt. J. E. Hetherington, of Cherry Valley, N. Y., some 30 years ago, and which, we understand, he has been using ever since. While this form of spring is a little more expensive for the material used, it is easier to make. The Root Co. is now turning out these springs by the thousand. All the 1903 supers put out by us from this date on will have these springs; and we anticipate they will be well received by the general bee-keeping public. Capt. Hetherington, who for many years enjoyed the reputation of being the most extensive bee-keeper in the world, is not apt to adopt an impracticable device; and the fact that he pronounces the principle good is pretty good evidence that the fraternity at large can safely adopt it. There are those who prefer a spring fast to the super instead of loose. By putting the spring in position, and driving a staple over one end, these may be securely fastened. A staple similar to the No. 11 double-pointed tack but a little wider is needed. We will have them soon at 20 cents per pound.

A Nail-Puller for a Quarter.

On receiving a shipment of hives or other goods, how often have you felt the need of a good nail-puller with which to open the boxes without breaking or splitting them? Such nail-pullers as were effective have been beyond the reach of most people who have a box to open only occasionally. Here is something that works on the same principle as the best nail-puller, and yet is within the reach of every one. It will be worth all it costs in opening up one shipment of hives. It is nickel-plated, weighs only 3 ounces, and may be carried in the vest-pocket, yet it is strong enough to draw nails up to 2 inches. The jaws are bedded over the head of the nail; then with the hammer attached, the nail is easily drawn. The head may pull off from some cement-coated nails, and then, of course, you can not get a hold on them. Usually the grip is such as to hold the nail under the head, so it is not likely to come off. Price, only 25 cents each; by mail, 30 cents. A heavier size is made that will take 2½-inch nails. Price, 35 cents; by mail, 40.

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Nat'l Bee-Keepers' Convention at Los Angeles, Aug. 18-20

AMERICAN BEE JOURNAL

43d Year. CHICAGO, ILL., APRIL 16, 1903. No. 16.

WEEKLY

APIARY OF L. C. MEDKIFF, OF SALEM CO., N. J.
(See next page.)

THE AMERICAN BEE JOURNAL

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GEORGE W. YORK.

DEPT. EDITORS,

DR. C. C. MILLER, E. E. HASTY, EMMA M. WILSON

IMPORTANT NOTICES.

The Subscription Price of this Journal is $1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

The Wrapper-Label Date of this paper indicates the end of the month to which your subscription is paid. For instance, "dec03" on your label shows that it is paid to the end of December, 1903.

Subscription Receipts.—We do not send a receipt for money sent us to pay subscription, but change the date on your wrapper-label, which shows you that the money has been received and credited.

Advertising Rates will be given upon application.

Weekly Budget.

GEO. W. BRODBECK, of Los Angeles Co., Calif., President of the California National Honey-Producers' Association, wrote us on March 27:

"The season here in California, until of late, has again been in doubt, but recent rains make it more promising, so that we now feel confident of a crop. A large yield, though, will require more and better rains; but of this we feel more hopeful, and I am extremely anxious that this shall prove a bounteous year."

◆

DR. MILLER'S NEW BEE-BOOK is receiving very flattering comments from the editors of the other bee-papers. Mr. Ernest R. Root, of Gleanings in Bee-Culture, gives this racy write-up about it:

"FORTY YEARS AMONG THE BEES."

In our last issue I promised to tell you more about this new and interesting book by Dr. C. C. Miller. I have read page after page of it [Dr. Miller's new book], and the more I read the more I am convinced that it is one of the most practical books that was ever written. There are 101—yes, 1001—little kinks, little tricks of the trade, little ideas, and big ones, too, which, while they may be old to *some* of the veterans, I am of the opinion will prove to be new and useful to the majority of them. The Doctor has crowded into these 328 pages his ripest experience; and not only that, he has drawn from the ideas of others so that we have the very latest and best in the way of practical information from one who has actually spent "forty years among the bees."

In our previous issue I spoke of the fact that the writers of text-books, and editors of papers, often assume too much knowledge on the part of the one they are supposed to instruct. Our author, while he is not writing for beginners, does not assume anything of the sort. He describes just what *he* does in the bee-yard, and *how* he does it. Even in the simple matter of catching a queen, he goes into full details, illustrating by photograph each step in the operation. And that reminds me that, some four or five years ago, I told the Doctor he ought to get one of those little pocket kodaks; that one who wrote as much as he did ought to be able once in a while to give a picture of the *modus operandi*. The next thing I knew he had bought him a little camera, and was snapping it on every thing right and left. Why, you just ought to see how he illustrates in his book his various manipulations, with that handy little instrument. Take, for example, his method of getting bees off the combs, as shown in Fig. 26, page 83. Without the book itself I can not describe to you exactly the vigorous shake or "shook" he gives a comb; but with his left hand he grabs the end-bar securely; then with his right hand, or fist, rather, he comes down on the back of his left hand, holding the frame, with a quick, sharp blow. Why, you can actually see Dr. Miller's chubby fist knocking every bee *clean off*. Did you ever try to shake a comb with two hands, giving it the most vigorous kind of "shook," but it would not "shook" *all* the bees off unless they were black ones? Well, take Dr. Miller's plan, and, presto! every bee will drop *instanter*. In Fig. 28 he shows the art of sweeping bees off the comb; in Fig. 31 how he stays up his foundation with wooden splints, and a good plan it is. too.

Again, we get a glimpse of the Doctor holding his Miller feeder, just as if he were describing its merits before a convention. Another view that is most interesting is the drive leading up to the Miller mansion. On one side of the road is a row of beautiful lindens, making the view from a purely artistic point very attractive. Fig. 29 shows the sealed brood of laying workers; and it is the best representation in printer's ink of such brood I have ever seen. Fig. 60 is a remarkable view of a section filled with foundation—one large top starter and one narrow bottom starter.

In Fig. 61 we see the Doctor in his light summer clothing, trimming foundation up for sections. Yes, we can almost see the sweat rolling down his good-natured face. In Fig. 83 we are forcibly reminded of the fact that the Doctor believes in cool dress for summer work among the bees. One thickness of clothing, bee-veil, and hat, shoes and stockings, complete his regalia, and he looks very neat and comfortable standing up among his favorite rose-bushes. In Fig. 84, again, we see Miss Wilson, his sister-in-law, in her very neat bee-suit. Well, I might go on and describe each of the 112 pictures that are so interesting and also instructive.

Yes, the book is full of good things—packed full of them, and I question very much whether *any* progressive bee-keeper, beginner or veteran, can afford not to read this book clear through. You may say you have read the Doctor's writings for years. Granted. But you will find that there are many little kinks that he describes in his book that he has never put on the pages of a bee-journal—not because he was not willing to impart what he knew; but because, when he sat down to write a book, one thing after another suggested itself until he unfolded a new story that is as good as a story, and far more profitable.

Editor W. Z. Hutchinson, of the Bee-Keepers' Review, had this to offer after having "dipped into it here and there:"

"FORTY YEARS AMONG THE BEES."

A few years ago Dr. C. C. Miller wrote a readable and instructive book called "A Year Among the Bees." In this book he gave advice for conducting the affairs of the apiary from the beginning to the end of the year, hence the name. The demand was such that the book was soon out of print, and I have often wondered why the good Doctor did not get out a new edition. I have always attributed this to a lack of time on the Doctor's part, as he once told me that, years ago, he had looked forward to the time when he might have a little leisure, but, later, he had given up all such hopes. It seems, however, that he has been using his time of late in writing an entirely new book, with a title that sounds very much like the old one, but it means forty times as much, as it is "Forty Years Among the Bees." In this the author goes briefly, but concisely, over his forty years of bee-keeping, for he has really kept bees for forty years. Not only this, but he gives us a delightfully written biographical sketch of his boyhood in Pennsylvania, his heroic struggles in securing an education, in which he boarded himself, cutting his weekly expense for board down to only 35 cents a week, which so affected his health that he has never fully recovered from it. I found this account of his early life so interesting that I read it aloud to the whole family. Most vividly did it recall my own boyhood's days, in which I roamed the forest as free as the wild things in whose lives I became so interested.

Another very interesting feature of the book is the large number of kodak pictures with which its pages are embellished. The Doctor has surely learned how to "push the button," or have some one do it for him, with considerable proficiency.

I have not yet said one word about what is probably the most important part of the work, that is, the main body that gives the solid instructions regarding actual work in the apiary. There are two reasons for this: One is the lack of room in this issue to do the subject justice, and the other is that I have not read it. I have done this, however: I have dipped into it here and there, just enough so that I feel warranted in saying that it is the master-piece of the author's forty years among the bees. I shall read it, however, every word, and future issues will contain frequent comments upon what I have read in "Forty Years Among the Bees."

The postpaid price of Dr. Miller's book is $1.00; or with the American Bee Journal one year—both for only $1.75; or we give it free as a premium to any one who is now a regular paid-in-advance subscriber to the Bee Journal, and who sends two new subscribers to the Bee Journal for a year with $2.00 to pay for same.

◆

MR. L. C. MEDKIFF'S APIARY is shown on the preceding page. He wrote thus, when sending the picture:

I send a picture of my apiary taken in the fall just before taking off the upper hive-stories. I had a fair crop of clover honey, but one of the poorest fall crops I ever knew or heard of for this locality. We had lots of flowers, but it rained so much and was so cool that the bees gathered very little. I had to feed about half of my colonies, of which I have 51.

The hive that I am standing by, with a smoker resting on it, contains one of my favorite colonies, and is one of superior stock.

L. C. MEDKIFF.

◆

STENOG—the man on the fence who is noted for his "Pickings from Our Neighbors' Fields" in Gleanings—had the following appreciated paragraph about this journal in his department recently:

"Although I have not had much to say about the 'Old Reliable' lately. it is not because it does not deserve it. Mr. York is not relaxing any of his efforts to make his journal indispensable to every bee-keeper. The high moral tone of the journal is very commendable. Mr. Hasty is always at his best here."

◆

MR. THOS. WM. COWAN expected to start from California about Easter for Boston, thence to Europe, and possibly Africa, to be gone a year. Mr. Cowan is a great traveler when once he gets started.

ESTABLISHT IN 1861
AMERICAN BEE JOURNAL
THE OLDEST BEE-PAPER IN AMERICA

43d YEAR. CHICAGO, ILL., APRIL 16, 1903. No. 16.

✻ Editorial Comments. ✻

The Honey and Beeswax Imports of the United States during 1901 and 1902 were as follows:

Honey in 1901—182,196 gallons;	value	....	$ 83,599
" 1902—167,301 "	"	....	56,383
Beeswax in 1901—213,773 lbs.	"	....	55,884
" 1902—408,706 "	"	....	115,937

Carpet-Grass has been highly spoken of as a honey-plant. In the Rocky Mountain Bee Journal, W. A. H. Gilstrap says that while it is a good yielder of fine honey in some favored localities, it is distinctly a swamp growth. "It can stand a dry climate if the ground is wet enough. Any of our upland grain-land is too dry for carpet-grass."

Wax-Production.—If there is any place where the production of wax at the expense of honey might be made to pay, one would think it would be in some parts of Cuba. A. I. Root reports from there that wax brings 35 cents spot cash, while honey scarcely nets the bee-keeper, who is away from the railroads, more than two cents a pound!

Los Angeles, Calif., has been selected by the Executive Committee as the place for holding the next annual meeting of the National Bee-Keepers' Association, and August 18, 19 and 20, 1903, are the dates.

The main reason for deciding on Los Angeles was on account of the low railroad rates in force at the time of the Grand Army meeting at San Francisco, which is held the same week, and the same rates apply to Los Angeles.

Further particulars will appear in the regular official notice to be issued by the Secretary of the Association later on, as soon as definite arrangements can be made as to hall for holding the meeting, hotel accommodations, etc.

We may say that San Antonio, Tex., and Salt Lake City, Utah, made honorable and strenuous efforts to secure this year's meeting of the National Bee-Keepers' Association, but those who have had the most experience know that in order to have the best and fullest attendance, the meeting must be held when low railroad rates all over the whole country can be taken advantage of, and the Grand Army beats them all in that line. So that fact had great weight with the committee in deciding the matter.

Pear-Blight Treatment.—Those who are familiar with the trouble bee-men have had in California, will be glad to learn that Dr. M. B. Waite, of the Department of Agriculture at Washington, is reported to have found a solution that will be a relief to the bee-keepers. An editorial in Gleanings in Bee-Culture says:

> According to a newspaper report (a source which we do not always credit, but which seems in this case to bear the appearance of genuineness), Dr. Waite has discovered a plan by which "colonies of the bacilli" already existing in pear-blighted trees can be located and removed from the tree before it comes into bloom. Dr. Waite is quoted as saying, referring to the pear-growers, "Let them put the diseased part of the tree out of the way before insects begin to fly, and before the blossoms come out for them to alight on." Very simple. And now Dr. Waite is to be sent by his department to Colorado, to show the orchardists how to discover the "colonies of bacilli," and get them out of the way before bees and other insects have an opportunity to carry the infection. According to the same report, the "colonies of blight bacilli live in green bark where the blighted discolored portion blends off gradually into the normal bark." The Doctor simply recommends a little common-sense and some tree surgery. He says the pruning-knife or shears must be dipped in some disinfecting medium every time it cuts off a limb of a tree. It would be monstrous foolishness to scatter the blight from tree to tree in the very act of preventing such spread.

"Improved Queen-Rearing, or How to Rear Large, Prolific, Long-Lived Queen-Bees," is the title of a neatly-printed pamphlet written by Henry Alley. Mr. Alley is a veteran bee-keeper, and probably the Nestor among those engaged in queen-rearing.

Courtesy Beverly Evening Times.

HENRY ALLEY.

He will, no doubt, provoke opposition by saying that no better queens can be reared by starting cells in a full colony than in a nucleus of one Langstroth frame of brood and two of pollen and honey with adhering bees. But Mr. Alley's three-frame nuclei are really stronger than that term usually implies, for they are materially strengthened by the addition of young bees after being formed. On three or four successive evenings, about sunset, he takes a comb of bees from some strong colony and brushes the bees down on the ground in frout of the nucleus.

After forty years' experience he prefers for rearing queens on a large scale small nucleus hives containing five frames about five inches square.

He does not favor rearing queens over a colony with a laying queen except at swarming-time, unless the colony is about to supersede its queen.

The well-known Alley plan of starting cells with strips of comb containing eggs is given in detail, with some new features, and the whole pamphlet is written in a practical and compact manuer. The price is $1.50; 50 pages.

Working Bees with Few Visits.—A few years ago the noted French bee-keeper, Geo. de Layens, practiced and advocated a plan whereby he established apiaries at some distance, and visited them only a few times in the year—perhaps three times. Of course, he worked for extracted honey. For some reason little was said about it on this side the water. Now, there appears in the Bee-Keepers' Review the account of something in the same line by a Michigan bee-keeper, E. D. Townsend. The following particulars are of interest:

> The bees are wintered on the summer stands in packing cases. About Oct. 1 I make a trip down there, look them over, feed any light ones until each colony has at least 20 or 30 pounds each, and then pack them for winter in from two to six inches of chaff. They are not disturbed again till I put the upper stories on, the first of June.
>
> As our honey season does not open until about June 15, it will be seen that the bees have plenty of room previous to the flow, hence do

not get the swarming-fever; and, as I put two upper stories on each of the strong colonies at this visit, there is no swarming except in cases of supersedure of queens during the honey season. This does away with all watching for swarms.

As I want my clover honey separate from the basswood, I make a third trip the first of July, and extract what clover there is, putting back the upper stories to catch the last end of the clover and basswood flow.

What clover and basswood there is I extract about Aug. 1; and, as there is no fall flow at this yard, this ends the season.

If it were not for keeping the clover separate, it would not be necessary to make more than three visits a year.

I have an assistant living about one-half mile from this yard, and he looks over the colonies, and adds upper stories where needed, visiting the yard twice during the honey-flow—once about June 24 and again July 12. He also helps me extract and pack the bees for winter—in all, about eight or ten days' work. This yard is one-third mile from any house, and there is no one there to watch and hive swarms when I am away.

Now, for results: The crop of 1901 was 10,500 pounds, and, last year, it was 4,500 pounds, making 15,000 total for two years. This was sold at wholesale at 7½ to 9 cents per pound, at an average of about 8 cents, making $1,200, or $150 each for the eight trips.

Convention Proceedings.

Chicago-Northwestern Convention.

Report of the Chicago-Northwestern Bee-Keepers' Convention, held in Chicago, Dec. 3 and 4, 1902.

BY OUR OWN SHORTHAND REPORTER.

(Continued from page 229.)

Mr. N. E. France, Inspector of Apiaries for the State of Wisconsin, talked on foul brood during practically the whole of the evening session, as follows:

FOUL BROOD—ITS CAUSE AND CURE.

There are many parts of this subject, and so many and varied are the interests that I hardly know on what part of it to touch. I had outlined quite a paper, thinking that it might go to the press, and through the published report of this meeting do considerable good. The headings had been finished, and I had started to typewrite out a full report, when some one—some of my comrade bee-keepers who had been in the northern counties hunting—sent down some deer heads without so much as asking me if I were at home, or would do the work for them, with instructions to "Mount this head for my house and send it back;" other heads kept coming in until I had dozens on my hands, so my prepared paper had to wait—the deer heads (fresh meat) could not wait, but needed immediate preparation.

I have been unable anywhere to procure an artist capable of making a drawing looking down into the depth of the brood-comb as the naked eye sees it. I went to three of our State Normal Schools in our State; gave the artists samples of comb, explained to them what I wanted, and they said, "Yes, we can see it." "Now," I said, "I am not asking the price, but can you make a drawing of this?" They said, "I will try it;" and after a time they would send me back the comb, saying, "I can not get the depth as the naked eye can see it." Consequently, if I can explain it so that you can understand it, it is the best I can do.

First, What is foul brood, and what does it look like? It is a germ disease. Now, in going over our State at Farmers' Institutes for the last six years, I have been surprised to find old bee-keepers who were well versed upon bee-keeping, and by so-called bad luck nearly run out of the bee-business, not knowing that foul brood was underlying all their trouble, and they didn't know what the disease was, and as I heard a remark made since I have been here, that one of the strong indications to detect it would be by the odor or smell. I will confess that so far as my study has gone, and from samples obtained from various States, as well as from all over my own, I find many, many yards where, in the same apiary, one colony is affected and the next is not; another is affected and the next one to it is not; one has a strong odor of foul brood, and the other little or none, according to the condition of that hive. Now, why that is I can not say. We may have foul brood in our yard and not detect it by any odor. If we had a room where we could have the sunlight from the morning sun shining in I would ask nothing better than that each one would individually take a piece of comb containing foul brood and see the different stages of it for yourself. There is nothing like seeing to impress it upon one's mind. If those who have not seen it—and I will confess that the samples I have can not be seen well in this light—I question if you can get any satisfaction out of it, but I will try to explain some of the stages of the disease.

This disease, as I find it largely in the Northern States, especially Illinois, Minnesota, Wisconsin and Iowa, and on to the west, seems to affect the bee when it is along from four to nine days of age; sometimes it will be later. As we go farther south into the Southern States, it seems to affect it at an earlier day, along from two to three up to six days of age, making its first appearance.

Those first symptoms to the naked eye perhaps would not be noticed. I had to shade it here to show that it lies down curled up; right there is where it gets its first fatal blow; it is in the food. Foul brood becomes contagious to that larval bee just when it is fed the disease, and not before, and never until then. For instance, this cell [referring to drawing] is diseased and that is not, simply because this has been fed the disease and that not.

The first indications are that this larval bee becomes restless, and instead of lying down in a flat, curled-up condition, it becomes standing on the point end, with the larger portion of the larva uppermost, and a little brownish streak begins to show. The naked eye, perhaps, would not notice it at that stage; but instead of that growing (these are not true drawings)—all of us have seen the natural healthy brood—this bee, lacking the vigor of a healthy bee, the germs of disease preying upon it, it becomes weakened and falls flat upon the lower side-wall of that cell instead of standing apparently out from the walls of the cell.

Right at that stage the gases begin to accumulate internally in that larva, and it becomes somewhat of a gelatine or gluish nature, and the moment that larval bee strikes the lower side-wall of the cell (represented as if the comb were turned, looking straight down from this—this would be the lower side-wall of the cell in its natural condition), wherever that strikes it will never let go; wherever pickled brood, chilled brood, starved brood, may strike against the lower side of the wall, or upper, it is sure to stay, and it is lost.

You can take a pair of tweezers and go down in here and take that out, but if it is foul brood, and it once strikes the side-wall, it is there for all time, and I know of no medical treatment that will ever cure that germ of disease once there. Instead of maturing and hatching, the cells become sunken instead of being capped over; they begin to be irregular, the gasses accumulating, drawing down apparently until it will break the capping sometimes in the center, but more frequently to one side of the center, the weaker part giving away, and have ragged holes in the cappings. Quite often that is the first stage that the naked eye would see.

Now, at that stage it has become dead matter; when it is in the ropy stage it is brown and stringy and ropy in its nature. The head of the bee will become dried faster than the rest. As I have tried to illustrate, here on the lower side-wall the head end of the bee turns up; back of that, as this spreads out in the cell, just as it is getting ropy, there apparently is a little back-bone with ribbing showing, then the odor is worse; it is then at the ropy stage; it may stay in that condition from three or four days to three weeks, according to the condition of the weather; such weather as we are having lately it would remain in one unchanged condition the entire time. It will continue to dry down on the lower side-wall of the cell until we have just a little thin scale; sometimes it is as thick as the side-wall of the cell; quite often it is not even so thick, but invariably this one thing prevails—the head of that bee will become dried before the rest and curl up, and frequently that little bunch right at the top, and no one need ever mistake that for anything else. In the comb here in the window, that was the first indication that I looked for—this dried-down scale with that curled-up appearance.

If there are any questions on that part of it, perhaps we had better hear them before going further.

Mr. Meredith—I would like to ask a question in regard to ropiness. If it would be extended out by a toothpick, would it represent half or three-quarters of an inch?

Mr. France—That would depend upon the season. Just at this stage, when there apparently is back-bone and ribbing showing, and it is nearly flat across the cell, it is most ropy, and that is about the stage when the cappings are sunken in; then a toothpick would draw it out probably nearly the length of the cell before letting go; but now, at this time of the year it has become thickened by the coolness of the atmosphere, and would not draw it so far; it would be thicker.

Dr. Miller—Did I understand that that curled-up head is always present? Will you always recognize that?

Mr. France—I have never known it to fail as yet; both from samples from our own State and from nearly all of the States where I know of the disease. I have tried to compare it from different localities, and never knew it to fail. I find that in comparing that of the different localities with that of my own State, it varies little.

Dr. Miller—Will you tell us whose writing you ever saw that mentioned that feature of a turned-up head?

Mr. France—I think Dr. Miller, for one.

Dr. Miller—No, I think not; I think I never saw nor heard of it before.

Mr. France—That is the one thing. And one thing further: I have so often taken the comb out of the hive like this one I find in the window, and invariably when I go to a bee-keeper and examine the yard, if one colony seems to be stronger than another I pass that and go to the weaker one. In the weaker colonies I will find any disease if it is in the yard anywhere. I carefully open them, and if it is very bad undoubtedly I get an odor. If we look into a comb in that direction, straight in [indicating], that comb looks fairly clean, but if you want to see it, turn the top towards you, so that your eyes strike the lower side-wall; then a little from the front end you will see that dried, hard, curled-up larva in there; and in this one, while they are hardly as thick in depth as the side-walls are, they are considerably aged.

How many of you can be here to-morrow before half past nine? I want you to know every stage of this foul brood while we are here, because I have the samples, and I would hate to commit myself on examination of the comb by lamplight, although I did go to a yard the first of July after nine o'clock at night to inspect it, because it was demanded of me. I had gone through two apiaries, finding several colonies diseased. I had an appointment at a considerable distance, over 100 miles from there the next day. It would not do to skip neighbor Smith's place, so I called at his house about nine o'clock; we had only a lamp. I asked for the weakest colonies in the yard. I opened the weakest one, and said: "Mr. Smith, shut up the hive instantly; this comb must go to the house." They had one of these glass reflectors on the lamp; it hung on the side of the wall. We looked the comb over; it was similar to this one; the first thing I noticed was the sunken cappings; run a match or toothpick in there and draw it out, and you could see that brown, ropy stage; then where the ribs were we had a knife and cut away the upper portion of the rib on the lower side-wall, and we could see those black, dried-down scales. "Well," he says, "What will I do?" "Treat your bees, and do it to-morrow." I told him what to do, and he said he would do it. I was back there just 23 days from that time, reviewing that section of country; the basswood was in bloom; each of the hives had eight full sheets of foundation drawn out, brood well on towards maturity, and 48 full sections ready on each of his hives. It shows what can be done if it is done at the right season; if done during the basswood season it doesn't seem to set them back much.

Dr. Miller—To help us to understand that same point, will you refer to the picture and tell us about that lower part; is that meant to be an outside or bottom cell?

Mr. France—This is supposed to represent, as if I had cut away the upper side, showing just the lower, here being the lower, and this the extreme bottom of the wall [indicating].

Dr. Miller—The upper part, as it stands there, is the mouth of the cell?

Mr. France—Yes, sir.

Dr. Miller—So that the mouth of the cell is lower down?

Mr. France—I tried to illustrate it in this form, but can not make a good drawing.

Dr. Miller—The point in it is, is that turned-up head the bottom of the cell or mouth?

Mr. France—Yes, the lower side-wall near the front end, as if this were the cell [indicating]. I can touch it almost the moment I touch the cell.

Question—The septum in that case is away back?

Answer—Yes.

(*Continued next week.*)

Contributed Articles.

A Plan for Prevention of Swarming.

BY L. STACHELHAUSEN.

DR. C. C. MILLER:—I just received from Chicago your pretty book, "Forty Years Among the Bees," and commenced at once to read it and I am delighted with the many practical hints it contains.

It seems to me you are still misunderstanding my plan of preventing swarms—and perhaps a "certain editor" is to blame, who talked of forced and "shook" swarms in combination with my plan. What you say (on pages 173 and 174 of your book) is certainly true for these forced swarms, but not for my plan. You say: "There are thousands of prospective bees in the brood taken away." That is the reason I *unite* these bees, hatching from the brood taken away, as soon as they are of any value to the main colony. Certainly the young bees do housework, but in the main colony (forced swarm) is at first none or very few brood; as soon as the young bees are employed in the other hive with nursing the brood; as soon as young bees are needed in the main colony they can be given by brushing off some of the combs. That will not cause swarming, as long as there is no surplus of young bees compared with the open brood (Gerstung theory).

Another explanation: I see, page 113, you have observed the advantages of large hives for development in the spring. An 8-frame hive is entirely too small for this purpose, consequently you give two stories as soon as needed; but these two stories are not practical for comb-honey production, so you crowd the bees and 8 brood-combs again into one story, when the honey-flow commences (page 130). You take away 1, 2 or more brood-combs and at some circumstances some bees, too. I think that is weakening the colony considerable, and your colony is now in just such a condition that the swarming-fever is induced, because the queen has not enough empty cells to lay eggs in them.

I, too, use very large hives in the spring. When the honey-flow commences I crowd the bees into a small brood-chamber *without* brood, and give the supers. Now comes my invention:

By using the Heddon plan to prevent after-swarms, the bees, which hatched from the brood taken away, are united with this colony as soon as they really do field-work, that is, as they fly. Every single bee of the colony, in whatever stage she may be, is used in this colony, as soon as she can be useful, and the egg-laying of the queen is interrupted very little.

You say that with you a colony, which shows no desire to swarm, will give more surplus than one in which swarming is prevented in some way. This is not so in my locality I have no trouble at all with colonies swarming during the honey-flow, but I never could get satisfactory crops of comb honey from an old colony with a brood-chamber as large or larger than a 10-frame hive. Swarms hived just at the beginning of the honey-flow have given me the most surplus honey. But they have the disadvantage, that they are getting weaker every day; but that is easy to overcome. Let the brood hatch in another hive outside of the swarm, and unite with the swarm as soom as they can be useful.

A main advantage of my plan is, that no queen must be hunted up. The whole manipulation does not take much time, and can be done when convenient. I do not think a simpler and better plan could be invented.

I used this plan the first time about five years ago; for two years I have not produced any section-honey, because here bulk-comb honey pays better. Othsrwise I would probably have tried a few variations. For instance, the automatic plan of uniting, as recommended by F. L. Thompson, in the Progressive Bee-Keeper, seems worth trying. Another plan proposed by M. R. Kuehne, California, in a letter to me, I will try this year. A colony is shaken on starters and the sections given; on top of them is laid a board with an opening closed by a double wire screen (as the Root's use for getting queens fertilized over full colonies); the brood-combs, with enough bees to protect them, are set in a story over this wire screen. Now these bees in the upper story can rear a queen. I would give them a ripe queen-cell, and as soon as this queen is fertilized and laying, the wire screen is removed and the two queens can fight it out. It is probable that the young queen will kill the old one. If the colony in the upper story should get too strong, some of the bees can be brushed from the combs in front of the lower hive at any time.

If you prefer not to manipulate the colonies except they have queen-cells, you can wait till the first cell is capped, but then it is time to manipulate the colony. I thought it too much work to examine so many colonies every 10 days.

I hope that you will think better now about this plan.

Bexar Co., Texas.

[Accompanying the foregoing was this from Dr. Miller, to whom Mr. Stachelhausen wrote the above :—EDITOR.]

MR. EDITOR:—One always runs some risk of misrepresenting when trying to describe something with which one is not entirely familiar, and so, when trying to tell what my good friend, L. Stachelhausen, is in the habit of doing, it is not so very strange that I did not speak entirely "by the book." His letter of correction, although not intended for publication, is so full of interest to bee-keepers in general, that I take pleasure in sending it to you that it may have a larger reading. C. C. MILLER.

An Overdose of Feeding—Use of Drones.

BY C. P. DADANT.

AFTER writing the article about feeding bees in the spring, which appeared on page 149, I showed it to a friend, who read it with interest, and said to me: "Good. I'll follow these instructions myself. It is an excellent system."

A few days later my friend came to me with a complaint. The feeding had not turned out satisfactorily, and his bees were in an uproar. So we went to his apiary and I soon discovered that one of the colonies which had been fed was being robbed. We carried it away, and as the weather cooled off suddenly, we were soon able to open it and discover its condition. It was a very weak colony, covering only two comb-spaces, and the can-feeder which he had used had been placed over a comb two rows away from the cluster. A little honey had dripped to the floor, and as the hive was slanting considerably forward, the honey had run out of the entrance. The robber-bees had found this and had begun pillaging this hive. There was but little to do, the colony being so weak.

This is in line with some remarks that I have made previously. The beginner cannot be too careful how he feeds. Good, average or strong colonies, when fed, take possession of the food at once. They store it in their cells, and although it creates an excitement among them, this soon subsides, especially if the feed is given at night right over or close to the cluster. Whether a can feeder is used, or a frame feeder, or a trough over the bees, or a simple dish in the cap, the warning must be the same.

Feed your bees where they can get at it immediately even if the weather is cool. Do not feed a queenless colony, or a colony that is too weak to rear brood. If a colony is weak but sufficiently strong to rear brood, it may be fed very successfully and helped along, if the feed is given it properly in the right amount and in the right place. The smaller the cluster, the less the amount of feed to be given at one time. Do not use an entrance feeder, as you will have to close that colony to make sure that the bees of a stronger will not help themselves at the same time and overpower them. If you keep it closed you are apt to forget it, or to open it too early or too late.

Let your feeding be done so the bees may get the nourishment in the warm part of the cluster. To feed the weak colony near the entrance or in too large a quantity is equivalent to feeding your newly hatched chicks in the same yard with the grown-up fowls. They will get next to nothing. It is even a worse practice with the bees than with the fowls, because the little chickens are fed from day to day, and you do not expect them to store away any of the feed except in their crops. But your bees are fed for future use, and you must not place them in a position in which the bigger colony may take away from them that which you know they will need for themselves.

All colonies that are worth retaining may be fed safely if the correct amount is given them in the proper place and at the proper time. Evening is always the best time to feed, because the night will give them time to store away out of reach of the neighbors and close to the cluster the supply furnished. They also get over the natural excitement caused by the finding of food. But when all colonies are fed, the strong ones at once begin to send out scouts that lurk about all the unguarded spots and soon find and carry away that which is not sufficiently defended against their depredations.

The Lord & Thomas Advertising Agency have spread over the commercial world a motto which we may well parody. They say, "Advertise judiciously." It is not all to spend money for advertising—that money must be spent "judiciously," or the result will be negative, and you will have cause to blame yourself for your bad luck. So it is with feeding bees, and we may well repeat, when the bees are in need of help, feed your bees *judiciously*.

USE OR USELESSNESS OF DRONES.

The point made on the use, or rather the uselessness, of drones is well taken (page 195). Those French or German writers, who support the idea of their usefulness because of the warmth they produce are all disciples of the old school. If drones produce heat, it has taken heat to rear them, and the heat and food used in rearing them would have produced worker-bees that are just as able to keep up the warmth of the hive as the drones are. The workers are small, it is true, but they take less room to rear, and consume less honey, and, when they are reared, if they happen to be needed in the field, they can turn out, and do turn out, and put in their time harvesting honey; while a drone is a drone till he is exterminated by the active laborers, after having consumed a goodly portion of the surplus of the colony.

In a state of domesticity we need drones only in a few of the best colonies, and it is a mistake to allow them to be reared in every colony as plentifully as the bees would naturally do it. Hancock Co., Ill.

Does Much Egg-Laying Shorten a Queen's Life?

BY DR. E. GALLUP.

NOW let us look into the theory that many writers advance, that if a queen lays too much she shortens her life, and will lay herself to death before her time comes, or she will empty her spermatheca and become a drone-layer early in her life.

We will take for an illustration one of the best milking breeds of cows. In order to produce the largest flow of milk, and the richest, all depends upon the amount and quality of her food, good care, etc. Now, do you believe that by extra care, feed, etc., to keep up the greatest possible flow of milk, her life is shortened? If you do, I do not. Neither do I believe the milk extracts from her vitality, but it is manufactured from the food she is fed.

Now, we will come back to the queen. In a normal or naturally large colony, and a good flow of forage, the nurse-bees prepare her food, it is predigested by the nurse-bees, and of the richest kind. They are constantly offering it to her, and during the height of her laying she is constantly accepting it. It is estimated that she lays more than her actual weight in eggs every 24 hours. And are those eggs manufactured by extracting the material from her body, or are they manufactured from the amount of the material or quality that she is fed on? And suppose the flow of forage continues constantly for six months, more or less, according to atmospheric or climatic condition, and we give her abundant room to deposit eggs, and an abundance of bees to keep up the necessary warmth, she can and will keep on egg-laying. What are you going to do about it? That is the question.

Why, if you are afraid she is going to lay herself to death, you can easily stop her laying by withholding her food.

In close observation of my long-lived and prolific queens, none of them diminished their egg-laying perceptibly until they were superseded, and not one of them, so far as I observed, became a drone-layer, as I did not allow drone-comb in their hives, and they were extra-prolific. My experience has been that all such extra-large colonies supersede their queens before I can see any sign of failure. In two cases the queens were superseded in the fall, and both mother and daughter wintered together, and both kept on laying until the following June. I have often wondered if after one impregnation the spermatozoa did not keep on increasing and multiplying in the spermatheca so as to keep up the supply. But, when we consider that the sac may contain millions of germs in an extra-large queen, as the sac is certainly larger than in one of those small, degenerated queens, it can be accounted for, as we certainly know that there are lots of them that become drone-layers the first or second season, and I never have seen spring dwindling with long-lived queens and long-lived workers.

The first colony of bees I ever purchased was when I was 15 years old. It was in an old-fashioned straw skep, as they were called then. I had bees before, given me by my aunt. I paid $7.50 for the straw-hive colony—an extra price because it was the old lady's lucky colony. You see I purchased her luck. I was bound to start right.

The hive contained about the same number of cubic feet or inches as a double 10-frame Langstroth hive. That was in Canada, 65 miles north of Vermont. They were kept in an open shed, built on purpose, facing the southwest. Our winters were long and cold, yet that colony wintered *perfectly* every winter—no dead bees on the bottom-boards. They came out as strong in the spring as they went in in the fall—no dysentery and no spring dwindling; all the comb was worker, except a very small piece of drone-comb in one side of the hive, about the size of my hand.

I always had one or more swarms from that colony, and usually a 20-pound box of honey in a season, and all the queens from that colony were of the large, long-lived variety, and very prolific. Of course, neither Gallup nor Alley ever monkeyed with them in the rearing or introducing of them, so there was nothing unnatural about them.

I saw my first queen from that colony—they were called "kings" in those days. I was taught by my aunt to ring bells, rattle old tin pans, etc., to make them cluster, then spread a white sheet in front of the hive, shake the bees on the sheet and watch them run in, and so I saw my first queen. She looked extra-large to my eyes at that time. How long they had been kept in that hive and reared in that comb I had no means of knowing, but this I do know, the combs became so full of cocoons that the bees became mere dwarfs and ceased to swarm or produce any profit whatever, and finally "went up the spout." Ever since that experience I do not keep old black combs for breeding. Of course, some writers claim that the age of the comb makes no difference in the size of the workers, but they are grandly mistaken. I know better.

Several writers are afraid there will be no limit to the size of the hives or queens, but there is, all the same. I have found that the 2-story Langstroth 10-frame hive is about the safe limit, as to size of hive, or one-story 20-frame hive for experimenting with. Now, the reason I have recommended queens reared in such a hive, and by natural swarming is, that I know that queens thus reared have the umbilical cord attachment, and I am not certain that queens reared by any other method do have that attachment, although we comply with all other requirements, such as abundance of nourishment, warmth, etc. That queens are reared with that attachment is a positive fact. You chaps that deny this, bring to my mind an old story in my life that I must tell now.

I was attending the County Fair at Ripon, Wis., and, of course, as usual, had quite a crowd around me listening to me talking bees, and among the crowd were two old gray-headed gentlemen, who showed by their actions and looks that they did not believe all my "yarns." Finally one of them spoke up and said:

"Look here, young man; I am an old man, have kept bees for years, my father kept bees for years, and my grandfather before us kept bees for years, and none of us ever saw such a bee as you describe; therefore I know there is no such a bee in a hive."

So you can see how easily a person can be mistaken. Because you have not seen the umbilical cord, and no scientist has ever made the discovery, you think your argument is on a solid foundation. Any person can demonstrate this, but not by looking for it on queens improperly reared.

Why is it that so many queens sent out do extra well the first season, but fail entirely the second season?

Orange Co., Calif., Dec. 28, 1902.

Our Wood Binder (or Holder) is made to take all the copies of the American Bee Journal for a year. It is sent by mail for 20 cents. Full directions accompany. The Bee Journals can be inserted as soon as they are received, and thus preserved for future reference. Upon receipt of $1.00 for your Bee Journal subscription *a full year in advance*, we will mail you a Wood Binder free—if you will mention it.

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

Dimensions of a 10-Frame Hive.

What are the inside dimensions of the Langstroth 10-frame hive? We have started with one colony, and would like to make our own hives until we can get enough colonies so that we can get five at a time.

Union Co., S. Dak. MRS. GEORGE S. EDDY.

ANSWER.—18¼ inches long, 14¼ wide, and 9⅝ deep.

Lotion to Whiten the Skin.

A lotion to whiten the skin is made by combining four ounces of extracted honey, one ounce glycerine, one ounce rosewater, three drams citric acid, and six drops of the essence of ambergris. Apply a little to the face and hands two or three times a week, using a linen pad for the purpose.—Chicago Daily News.

Clarified Honey for Brilliantine.

On page 152, I saw a recipe for brilliantine for the hair, and as I am not sure what is meant by clarified honey, will you please tell me? I shall be grateful, as I have been looking for something of the kind for some time.

Montezuma Co., Colo. MRS. OLIVE GEORGE.

ANSWER.—The recipe that you mention is not mine, but one copied from the "Health and Beauty" department of the Chicago Daily News. What is meant, I think, is a good quality of extracted honey.

Overstocking a Locality with Bees.

I notice on page 167, the answer to Mrs. E. K. Hoffman's inquiry as to how to get into bee-keeping, and the statement that if the ground was fully occupied by other bee-keepers it would be trespassing to start another apiary.

I am inclined to the opinion that that is putting it a trifle strong. I would say it would be discourteous, and unkind, and unprofitable in the end. But no worse than to start a grocery store on a street that was fully occupied, which happens quite often.

I kept bees in an alfalfa district last season, and it is my opinion that there is very little danger of overstocking an alfalfa district.

The American Bee Journal is very much appreciated and carefully read by me. B. F. L.

If there is no danger of overstocking an alfalfa district, then there is no need of any further talk on the subject, but the actual fact is that some of the bee-keepers in the alfalfa districts of Colorado are complaining that already their districts are overstocked.

It does not seem to me that the case of the grocer is a parallel one, although, perhaps, most people who have not given the subject much thought would agree with you.

In the first place, there is this radical difference: If several men occupy the same field with bees, each man will get his share of the pasturage in proportion to the number of colonies he has, while the grocery trade is by no means in proportion to the capital—the hustler may outsell his competitor with double the capital.

Suppose there are five grocers in one place, fully occupying the ground and doing all the business; and a sixth one starts a store. Now, there are three things possible:

1st. Those five grocers already in the field may be able to hold their trade in spite of the interloper, and he may get nothing to do, and be obliged to quit the field.

2d. The new man may be such a hustler that he will entice some of the others, and so get his share, thus reducing the trade of the others.

3d. There may be extra exertion on the part of all, and they may reach out to more distant points increasing the total business so that although the new man gets a share the old ones will do as much business as ever.

Neither of these three cases will be entirely the same in bee-keeping. The first case is entirely impossible, for the new comer will get his pro rata portion of the nectar in spite of any effort on the part of the others.

Something like the second case may happen, but there is this great difference: The encroaching grocer is at a disadvantage, for the others have the advantage of an established trade, and it is not the placing of his capital there that gets him his trade, while the old established bee-keepers have no advantage, and the new man is sure of his share of the trade (nectar) merely by placing his capital (colonies). The third case is utterly impossible in bee-keeping, for the bees can only forage within a fixed limit.

The case of the stock-raiser would be a more parallel one. If a stock-raiser had a field fully occupied, and another man should come and dump into that field a bunch of cattle to be fed, he would be much like an interloping bee-keeper. But the stock-raiser may have a legal claim to the ground, while the bee-keeper has only the moral claim of priority.

Truth compels me to say that these views are not original, but obtained from one who has given the matter much thought.

A Beginner's Troubles and Questions.

This is a nice country for bees, and we bought 7 colonies last spring. We had good luck in getting nearly all the swarms, but as we did not know anything about bees we did not take care of them as we should, although we tried our best, and now we are losing our bees, which is quite a loss to us in our circumstances, just commencing in a new country.

The bees did quite well in the summer, considering the cool weather we had. We put 20 colonies away last fall—heavy colonies—but not knowing about feeding bees, as now we have found out in reading the American Bee Journal, our bees did not have proper attention. As there is no one near that we can find out anything about bees from, I thought perhaps you would be kind enough to answer some questions, and maybe we could save enough of our bees to start with in the spring.

We had intended buying our hives and supplies soon, but it begins to look as though we will not need them. If we lose all our bees we will not be able to start again this year, and it discourages us very much. We intend to build this summer, and would have a good cellar another year for them. I suppose the place we have for them is not proper, but we heard of a bee-keeper in southern Minnesota that had this kind of a place. It is a house double-boarded, tar paper between. It is dark in there; we have the bees tiered one hive upon the other.

We tried to get some Porto Rico sugar, as given in "A B C of Bee-Culture," but we could not get it, so we are using light brown, and 2 colonies have died since we commenced feeding them. They are all short of stores, and others are getting smaller. We also lost 2 colonies that had plenty of honey, so we do not know the reason. We have lost 5 colonies already, and I am afraid, from the way they look now, that we will lose them all. Do you think it would be better to build a shed and leave the south side open so the sun can shine on them?

Would granulated sugar be best to feed them? We followed the directions given in the "A B C of Bee-Culture" for early spring feeding. The bees seem to like it; it forms a syrup, but perhaps that is not best to use.

We think we are through with the coldest weather now, and if we could only save enough bees to start again I should be glad, and would try to learn more about them.

I thought perhaps you would tell us something about what would help us. I don't know where else to get information. We made our hives last summer. Also let me know something about feeding. Would old cloths be all right to put over the brood-nest to keep the bees warm? You know our hives are different from yours. We haven't the quilts in ours.

Could we put some colonies together, as some have died, and there is only a small colony left?

How about the queens if we try to unite?

We have had some warm days this winter, and I thought perhaps we could unite some and feed. We have no honey to feed them.

You will see by my letter we are very ignorant as to how to take care of bees, but I hope we may improve.

MRS. C. G. CRUICKSHANK.

Crow Wing Co., Minn., Jan. 20.

A repository above ground, closed as yours, is not a good place generally, neither is a shed facing south as you propose, unless the bees are packed on all sides excepting the south. But it will not be best to make any change until there comes a day warm enough for the bees to fly. On a still day with the sun shining they will fly when the thermometer is no higher than 50 degrees. It is now getting along toward spring so close that it is possible that all that will be necessary will be to set them out the first day they can fly and leave them out, but it will be much better to give them some protection, if it be nothing more than to pile corn-stalks about the hives.

I am glad you have a text-book to consult, but I think if you will look again you will find that it advises granulated sugar for feeding. Neither is *spring feeding*, but winter feeding the thing for you. Spring feeding is not to be considered until bees can at least fly every few days. I think your text-book will tell you that you should not feed syrup of any kind in winter, but candy made of granulated sugar. If this is made in frames, or in cakes and laid on top of the frames covered up warmly, you will have done the best thing you can for your bees, so far as can be judged from what you have written.

❋ The Afterthought. ❋

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, O.

METHOD OF STARTING QUEENS IN AN UPPER STORY.

So far as words and names go, Stachelhausen's method of starting queens in an upper story is a sort of a swindle. His upper story is on the bottom-board, and the queen and main colony elsewhere at the time. Practically, however, I guess he has a splendid idea—take the bottom story entirely away for one day, and then bring it back. All protracted monkeying on the part of the keeper, and waste of time on the part of the bees, are thus shut off, and you *know* your cells are being started. Yet the advantages of rearing queens above an excluder are kept, most of them. I did not know the plan of getting the queen fertilized from the upper story was abandoned, and was a little surprised to hear Mr. S. say so.

Interesting to see that Stachelhausen thinks the larvæ usually taken for the Doolittle method are not young enough for the very best results—would sooner take them an hour or two before they hatch than to wait many hours after. And so, perhaps, it is a good plan to repeat this sentence of his:

"After trying all the different methods I went back to the Alley strips—and can't help believing that if the artificial cell-cups are preferred it is merely a case of fashion." Page 151.

HONEY FOR SWEETENING FRUITS.

Mrs. J. L. Strong finds the sweet of honey harmonizes well with most fruits, but that *apples* are an exception. Kind o' seems to me I have had occasion some time to notice that honey and apple-sauce made a bad combination. Unless somebody comes forward to report success in sweetening apples, let that stand for the present as disapproved. Page 152.

CONSUMPTION OF STORES IN WINTER.

On page 158, H. B. Stumpe's experiment is instructive. A good colony taken out to fly in winter used up eight pounds of food in the one month next succeeding, while the others used only seven pounds in all winter. Presumably this extra eating was caused by extra brood-rearing—and that is undesirable in the cellar. The widely different results of winter flight seem to be explainable on this line. *Sometimes* it has no effect but the good ones of airing and drying both bees and hive, stopping the worrying, and giving the bees a chance to empty their bowels. *Sometimes*, in addition to these good things, a great lot of brood gets started, and soon the bees are in a worse condition than before.

USING THE SMOKER—FEEDING A NATURAL SWARM.

And so with G. B. Williamson's style of fuel and smoker, one smoker full will last half a day *if you don't use it much*. Some of us *use* our smokers.

Natural swarming is indeed good practice: but if you set it down that natural swarms never have to be fed you'll get badly left some time. "Left" is the exact word. A hungry swarm hangs together almost winter-cluster style for a good, long spell, and then seizes the first bright, warm hour to leave the ranch. Page 156.

A MODERN ENTHUSIAST—NUMBERING QUEENS.

So many have grown staid and half-way cold that it is delightful to read once more a genuine, intelligent enthusiast. This is anent William W. Green and his apiary, pages 161 and 162. His report of the Cyprio-Carniolan cross is worth its place, certainly. How nice it would be if the qualities of a first cross would only stay so, instead of getting "every which way" with succeeding generations!

Having the hive-number belong to the queen and travel around with her is nice—in some respects—not nice to have numbers die, as queens eventually must. And for big apiary and cold heart it wouldn't do at all. The maxim that "figures can not lie" would get all battered up.

A RECORD ON INCREASE.

Sixty-five colonies against his will, and no bees or queen to make them of but one wandering swarm, is quite a record—a record which Mr. Peter Gallee may hold until somebody calls "Sixty-six!" on him. Page 162.

THE DIAMONDS DIDN'T SPARKLE.

But Mr. G. H. Wells couldn't get his bright, red diamonds, with black figures inclosed, to impress their prettiness on us in the picture. Never mind, Mr. W., we know they are pretty—and also impress you with a sort of my-own-ness, which is a good thing to have. Page 161.

THE "VIRGIN" APIARY.

The three modern hives and one old memento of C. W. Virgin constitute the most restful and rural view of the four. The grove looks almost like a natural forest. Nothing says, "Hustle!" nothing says, "Crowding here!" Page 161.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

Colony Left the Hive.

I had a swarm of bees come out to-day, or left the hive. I had been feeding more or less for the last two months. There were no young bees in the brood-chamber, or sealed brood. What was the trouble with them? I am a beginner, having kept two or three colonies for the last two years. IOWA.

ANSWER.—Possibly it was a hunger swarm, the bees leaving the hive because they had nothing to eat. Sometimes, however, they leave the hive when there seems no way of accounting for it except pure cussedness.

Using Hives Where Bees Died—Spraying Fruit-Trees.

1. I have lost 9 colonies of bees this winter. Will it do for me to put new swarms in the combs of the hives again, when they swarm this summer?

2. A man living a mile from where I do is going to spray his apple-trees with Paris green this spring. Will my bees bring it home to their hives? NEW HAMPSHIRE.

ANSWERS.—1. Yes, it will be all right.

2. If fruit-trees are abundant, your bees may not go so far. If scarce they will be likely to visit those trees when in bloom, and if he should spray during bloom it would mean death to the bees. But if he is an up-to-date fruit-grower he will spray only before and after bloom. The experiment stations have clearly settled that spraying during bloom is a damage to the fruit crop, and in several States it is against the law to spray during bloom.

Burr and Brace Combs—Telescopic Hive-Covers.

1. I am only a beginner, having 3 colonies in Danzenbaker hives. One has built burr and brace combs until I dread opening the hive. Would there be any danger of chilling the brood if I were to drum them into another story, after settled warm weather is here, putting a queen-excluder in to keep the queen above?

2. Would full sheets, starters, or old comb be better for their new place? I would prefer to have them build new comb, because the old comb is crooked (taken from a box-hive), and naturally leads them into bad habits of comb-building.

3. I have some telescopic covers. Is it necessary to have more than the thin super-covers if they are used, or is a heavy cover, Root's E or F, required also? MARYLAND.

ANSWERS.—1. There would be no danger of chilling the brood, and it might work all right and it might not. I knew one case in which the queen staid over the excluder two or three weeks and never laid an egg. Put the queen and the new story *under* the excluder.

2. Full sheets.

3. With a telescopic cover the thin super-cover is all that is needed.

Transferring—Getting Bees Out of an Old House.

1. Can bees be transferred at this season of the year (March 30)?

2. How can it be done to the best advantage?

3. How does Mississippi rank as a honey-producing State?

4. How can bees be gotten out of the loft of an old house? Can they be driven out with smoke? MISSISSIPPI.

ANSWERS.—1. Yes, any time when it is warm enough. Much transferring is done in time of fruit-bloom, which is much earlier, of course, in Mississippi than in the colder North.

2. I don't know of anything different from the instructions laid down in the books. But it might be better to wait till 21 days after the issuing of a prime swarm.

3. I have no definite knowledge about it.

4. It depends upon position, etc. If where you can readily reach them, smoke enough to quiet them, and then cut out the combs.

Keeping Bees in a House Room.

I have a room in the second story about 10 by 12 feet, with one window. By opening the window about 6 inches, and tacking sheeting over the remainder of the window, could I keep colonies of bees in the room? and would they go to and from the room and be able to locate their own hive on returning? I am living in the city, and want to accommodate 10 colonies that way, if possible. ILLINOIS.

ANSWER.—I'm afraid your plan wouldn't work satisfactorily. Bees cannot see as well as you, and with so little light they would hardly find their hives, especially when cloudy. It might do if you should leave the whole window entirely open, with an awning to keep out rain. Or you could have holes through the wall to each hive.

Cutting Out Drone-Comb—Moldy Drawn Comb.

1. If I go over each colony and cut out the drone-comb, will the bees build worker-comb in the space, if it is done when I put them out?

2. I have several frames of drawn comb that are moldy, and have quite a lot of dead bees in. Will the bees clean them out? and when and how is the best time to have it done? MINNESOTA.

ANSWERS.—1. They will be nearly sure to fill in drone-comb. Fill in the holes with patches of worker-comb.

2. They'll clean 'em up all right. Give them wherever needed, and if you have no immediate use for them do this way: Put them in a hive-body and set under a good colony, so the bees must pass through them in going in and out, and the bees will clean them. Do it any time.

Bees that Allow Robbing.

What can be done with bees that allow themselves to be robbed without making any resistance to the robbers? I have several colonies every spring destroyed in this way. They just work away and pay no attention to the robbers, even right through the fruit-bloom. They do not seem to distinguish the robbers from their own bees, or else do not care. I have tried everything I know, and without avail. The bees are not queenless. PENNSYLVANIA.

ANSWER.—I have never had any experience in this line, and don't know what can be done. But others have reported the same difficulty, and some one may be able to give the remedy; so the question is referred to the constituency.

Transferring Bees—Using Sun Wax-Extractors.

I began the bee-business in August, 1902. I bought over 30 colonies in boxes. I have lost 7 by starving, or at least 5 by starving and 2 by moths. My bees that were able to be robbed last year are all right now; they are gathering in pollen by the wholesale. I tried transferring one colony yesterday morning. I fed them with some others which I am feeding, and then in the evening I drummed them in a frame hive. They seem to be all right to-day. I thought I would feed them for awhile and let them go. The fruit is just beginning to bloom here, and so I thought I would try that one to see how it worked, and it worked like a charm. I have 7 others to transfer.

1. Do you think it advisable to transfer the balance of them at present (March 22), or wait until April?

2. Do you think the bees will starve after they begin to bring in pollen?

3. Do you think it is a good idea to fill a sun wax-extractor full, or just put in a little comb at a time? It is 12 inches high, glass top, you know. TENNESSEE.

ANSWERS.—1. Now is a good time to transfer, while fruit is in bloom; but it may be still better to transfer each colony 21 days after it swarms.

2. Generally not, but sometimes there comes a dearth, when they must be fed or starve.

3. If there are no combs that have been bred in, you can fill up, but if you put anything over an old comb the cocoons will hold the wax like little cups.

◆

Bees Standing on Heads—Frames Bee-Glued.

1. What is the matter with my bees? They seem to stand on their heads, and roar around the entrance.

2. What shall I do when frames are glued together? My frames are Hoffman frames, and are glued tight to the excluder, so that it breaks and tears up the frames to get them loose. TEXAS.

ANSWERS.—1. They are probably ventilating, making their wings move lively, so as to change the air in the hive.

2. Pry up the excluder carefully, starting it at different places, and then scrape off the burr-combs. Then don't let them go so long without cleaning again. You see it takes time to get in such bad condition, and likely you have not cleaned them off for several years.

◆

No Italian Blood in Them.

I enclose six honey-bees, the kind I keep. Is there any Italian in them? If not, what are they? NEW JERSEY.

ANSWER.—The bees received are of the kind called smashed bees. Before they were smashed I think they were black bees, with no Italian blood in them. It would be easier to tell if they had been sent in a tin or wooden box, or in a block with a hole bored in it.

◆

Shipping Nuclei—Bees Building Comb.

1. I have a customer who wants a queen and nucleus. How shall I send them? Are there cages for that purpose?

2. What is most profitable, full sheets of foundation or starters? Some say the bees produce so much wax when they are building comb, even if we furnish them old comb or foundation. How is this? IDAHO.

ANSWERS.—1. The usual way is to make a cheap affair in the form of a hive large enough to take three or four frames, well provided with wire-cloth, the frames when received to be put in full-sized hives. I do not keep anything for the purpose.

2. For most persons I believe full sheets are best. I always use them. Some wax may be secreted when not needed, but not a great deal. If the demand had nothing to do with the supply, we ought to find scales of wax to the amount of several ounces under a swarm hived on full combs, whereas you will find little difference in the amount of these scales whether full combs or empty frames are used.

3. You will find Miller queen-cages on the price-lists of supply dealers, but these are not the improved Miller cages described on page 246 of "Forty Years Among the Bees." I consider the improved decidedly better; but others may not think so.

◆

Keeping Down Increase—Rearing Queens.

1. I have 5 colonies of bees, and do not wish to increase. What would be the effect if I should leave on the entrance-guard all the season? Would the bees kill the queen after repeated efforts to swarm?

2. How long would it be safe to keep the young queen confined?

3. Would she be apt to lead off a swarm when she took her flight to meet the drone?

4. Would the plan prevent the bees from absconding?

5. Can I rear a good queen in a small nucleus by giving plenty of bees and cells that are started in a strong colony, say cells 12 days old? WISCONSIN.

ANSWERS.—1. Yes, they'd kill her.

2. Till you hear no more piping.

3. No more than in usual cases.

4. Yes, if you have only one colony; but with numbers there will be doubling up, going into wrong hives, and other troubles. I tried the plan thoroughly and it's bad.

5. Yes.

◆

Queen-Cells in February—Foul and Chilled Brood —Unfinished Sections.

1. February 24 I opened a hive in which I thought the bees were starving, and upon examination I found it had 3 capped queen-cells. This colony had a queen in the fall. What is the cause of these queen-cells appearing at this time?

2. What is the cause of bees crawling in the cells of the brood-frames and dying? They seem to be all right in every other way.

3. Would it be safe to let them keep these combs, or give them clean ones?

4. Last year I was bothered with black spiders and moth. Do they come back every year? What is the best way to get rid of them?

5. How can a person tell the difference between foul brood and chilled brood? I can find nothing regarding chilled brood in the text-books.

6. I have some unfinished comb in sections that are partly filled. Would it be safe to let the bees finish these? ILLINOIS.

ANSWERS.—1. Some accident might have happened to the queen after you saw her in the fall, or the queen may be played out.

2. Likely they were caught by the cold away from the cluster.

3. The bees will clean them.

4. Yes, you will find them faithful in their visits. Try to have no lurking places for the spiders, and have your colonies so strong that the bees will clear out the moths. Italians are much better than blacks to keep out moths.

5. Chilled brood doesn't string out like foul brood.

6. The honey will not be so good in them.

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We find we have on hand a few slightly damaged Clark and Bingham Bee-Smokers, which got a little damp and soiled at the time of the fire in the building where we were about 2 years ago. They are all almost as good as new.

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FROM MANY FIELDS

Wintered Well.

Out of 159 colonies of bees put into the cellar last fall I have found 4 dead. The others seem to be in fine condition. I have 12 colonies packed outside which have not been inspected. H. W. CORNELISON.

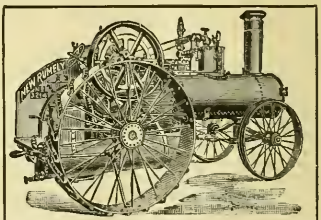
Washburn Co., Wis., March 21.

Bee-Keeping in Florida.

Bees in this locality are usually kept in a very primitive way. March 20 I visited an apiary of 30 colonies, located in a persimmon grove, on fine Bermuda sod, and surrounded with a picket fence. But the hives—not worthy of the name—hollow logs with a board on top. I told the owner that if I were the bees I would not work in such things. The bees were very diminutive blacks.

I went with a party, in a sail-boat, who went there to purchase honey. The apiarist had no comb honey, but thick strained honey which he sold for 75 cents per gallon, or 20 cents per quart. He took no bee-paper, but had often thought of getting patent hives.

A species of wild sage was blooming very



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abundantly all around in the vicinity of this apiary, and the owner said that it was fine for bees. There are many resources for honey; during March, yellow jessamine, ti-ti, sage, fruit-bloom of many kinds.

The most of the people living on homesteads in the piney woods keep a few colonies in log gums. On my asking them if they had much honey last year, they invariably answered, "I have not robbed them yet; we don't care for honey; prefer syrup."

From my observations I think bees consume more honey in this climate than in a cold one. They work all winter, carrying pollen and a little honey, and are usually cross. What they store during the spring flow is consumed during drouths in summer. I am often told, "My bees all starved during the drouth last summer," or, "The moth ate them up." So the winter of their discontent is not by freezing, but the opposite—heat and lack of moisture.

An intelligent bee-keeper, who lives on the St. Johns river, told me that the best localities in the South for profitable bee-culture were very malarious, and had many annoying insects. MRS. L. HARRISON.

Washington Co., Fla., March 23.

Shaken Swarms—Sweet Clover, Etc.

Lately I have noticed a number of articles on "Shook Swarms" and "Sweet Clover," and thought I might add a little of my experience.

I bought my first swarm when I was 16 years old (about 10 years ago).

For the first 3 or 4 years my bees did not do much swarming, owing either to mismanagement or the season.

As increase was what I wanted, I tried some experiments along that line. I tried dividing the bees, brood and honey, leaving one or two nuclei to rear a queen on the entrance of an empty hive and letting them run in; but results were not satisfactory.

The first artificial swarm that pleased me was hived in July, on 10 frames with starters in the brood-nest and 9 frames with full sheets in the extracting super. They built full a set of brood-combs and stored enough honey in them to winter on, besides 60 pounds for me in the upper story; this was about 5 years ago. Since then I have practiced the same system with many others, which would be like this:

Take 3 or 4 boxes (cracker-boxes for instance), lay one down on the side with the edge on the hive-cover or sheet by each colony you wish to shake from.

Then smoke and drum on the first two colonies you intend to shake from. When this is done start at No. 1, pick out combs, one or two at a time, and shake in front of the clustering-box; work fast and use the smoker some to hurry them into the clustering-box.

When the combs have all been shaken, and you know the queen is in the box, put on the upper stories, if any, and cover.

Proceed to No. 2, and so on until each box has a "shook swarm" clustered in it. Now, if enough time has elapsed to make them feel homeless, commence with No. 1, and take them to their new home, which should be in readiness. Shake them down at the entrance the same as a natural swarm, and they will hive themselves.

I have made as many as 20 or 25 in one afternoon.

I notice that some writers are afraid sweet clover will not stand close pasturing. That has not been my experience. We have about 15 acres of sweet clover on clay point in a pasture of 80 acres grazed by cattle and hogs. It comes up every spring and keeps spreading. In 1891 the blue-grass and timothy all dried up, but this clover furnished feed for the stock and some honey for the bees. It was cropped so short that the blossoms laid on the ground, and the bees could walk from one bloom to the other without wearing their wings out.

We had about an acre on rich low land that got the start of the stock in the spring, and grew higher than the backs of the cattle and horses. The neighbors thought this was queer stuff to sow for pasture, but when the dry weather came, in July and August, feed got

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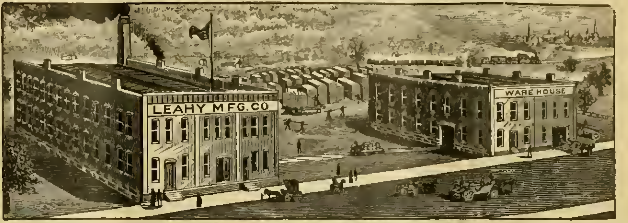

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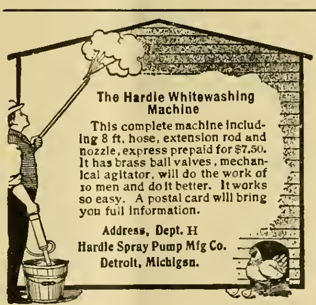
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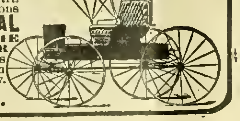

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so scarce, and the stock commenced on this and trimmed up everything they could eat, leaving it looking like a mess of hazel-brush; it seemed to thrive as well as ever, new shoots kept coming out, and they were as fast eaten off, until freezing killed it.

I should like to ask Mr. Barber (page 78): Why put anything in his honey to keep it from granulating? If it is pure, put into a tank and heat from 160 to 170 degrees, and use a thermometer to be sure about temperature. Out of 600 pounds which I canned while it was hot, 5 months ago, only 54 pounds has shown any signs of grain in it, and this had been heated, for experiment, to 150 degrees and had candied again.

Why cut your comb honey in chunks, and put into cans for "extracted" or "comb"? It is neither one nor the other. It seems to me that the wholesale grocers put enough of this stuff on the market without imitating them. It seems to me that if a customer wants comb honey let him have it straight, and extracted the same. If a bee-keeper is not neat enough to produce one or the other, why mix them?

No offense meant, Mr. Barber. I suppose others are doing the same. This is the way I look at it. B. A. Aldrich.

Woodbury Co., Iowa, March 9.

One of the Olives.

What is the enclosed domestic shrub? It is our earliest bloomer, and is attractive to bees.
East Tennessee.

[This is the first flower of the season. It belongs to the Olive family along with the ash and lilac, but as a native of Japan and China no common English name has been given to it. Botanists call it "Forsythia viridissima." It is an ornamental shrub, the abundant bright yellow flowers appearing before the leaves.—C. L. Walton.]

Prospects of an Early Spring.

We are having very nice weather, and it has the appearance of an early spring, with the temperature between 65 and 70 degrees, which has brought the maple to bloom, and the busy bee is once more bringing in pollen from the first flower of the season. The robins and the bluebirds have also made their appearance, and fill the air with their sweet music, to remind us of the beautiful spring-time.

My bees have wintered well, having lost only 2 weak colonies, and the remaining 52 colonies are doing nicely on maple bloom. The prospects are bright for 1903.
Wm. H. Heim.

Lycoming Co., Pa., March 20.

That Old Colony—Wintered Well.

Mr. Hasty must not be to hasty about that "old colony of bees" mentioned on page 184. If he will put on his "specs" and look at the article again, he will see plainly that said "old colony" belongs "to a stock of bees that were on the farm of my uncle, Wm. Sager, near North Bristol, Ohio, for over 90 years before I brought them over here," instead of saying that said "old colony" was over 90 years old.

The name of my aunt should have read Mrs. Elizabeth Diehl, instead of Duhl. She has since gone to her rest; having died Nov. 28 1902.

I was very sorry to hear of the death of Thomas G. Newman. I met him at 2 conventions of the National Bee-Keepers' Association, at Columbus, Ohio, in 1888, and in Chicago, in 1893. So they go, one by one—Charles Dadant, Dr. A. B. Mason, "Rambler," and next Thomas G. Newman, all in less than a year. I never met Father Dadant or "Rambler," but I had met Dr. Mason several times, and I regarded him as a very dear personal friend, and I was very much greived to hear of his death.

Bees have wintered very well, and have been carrying in pollen lively for several days. March 14 was the first day I noticed them carrying it in. There is lots of white clover,

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Golden and Leather-Colored Italian, warranted to give satisfaction—those are the kind reared by **QUIRIN-THE-QUEEN-BREEDER**. Our business was established in 1888. Our stock originated from the best and highest-priced long-tongued red clover breeders in the U. S. We rear as many, and perhaps more, queens than any other breeder in the North. Price of queens before July 1st: Large select, $1; six for $5; Tested Stock, $1.50; six for $8; Selected Tested, $2 each: Breeders, $4. Two-frame Nuclei (no queen) $2.50 each.

Special low price on queens in lots of 25 to 100.

All queens are mailed promptly, as we keep 300 to 500 on hand ready to mail.

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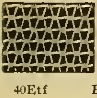

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Choice Tested Queens from the finest Red Clover Stock in the U. S In order to introduce this SUPERIOR stock I am going to offer a limited number of 2-frame Nuclei with a fine Tested Queen for $2.00 each: Queen alone, $1 00; Selected Tested, $1 50 each; Breeders, $3.00 each; Untested, from same stock, 75 cts. each, or $6.50 per doz. Discounts on 50 and 100 at a time. My Queens are bred by the best known methods, and I challenge the world to produce finer Queens or stock. Safe arrival and reasonable satisfaction. Address,

W. J. FOREHAND, Ft. Deposit, Ala.
16A2t Please mention the Bee Journal.

and if we have the right kind of weather we may look for a good honey season the coming summer. I hope this will be a prosperous year for bee men and women all over the land.

J. S. BARB.

Trumbull Co., Ohio, March 26.

Wintered Well—Good Year Expected.

As far as I know the bees have wintered quite well in this community. We put them on the summer stands March 12, the earliest for a good many years. We lost only 2 colonies (queenless) out of 101 put in the cellar last December. March 13 the bees flew like they do in the summer, and March 18 the mercury went up to 78 degrees. Soft maple is in bloom, and it was like summer all around, even in the bee-yard. bees carrying in both pollen and water, cleaning house and trying the strength of the weak colonies by trying to rob.

Indications point to a good year for both the bee-man and the farmer. L. G. BLAIR.

Grant Co., Wis., March 19.

Looks Like a Good Year.

The American Bee Journal has been a great help to me, as I am just a beginner in apiculture, starting in last spring with 6 colonies, 5 of which I bought in box-hives, and transferred them to Langstroth hives, which I made myself. I now have 11 colonies, having lost 2 that starved on account of my being sick at the time they should have been looked after.

March has been warm and rainy so far, and to-day the bees are busy around the soft maple, which is just beginning to bloom, and with plenty of sweet clover it looks as though we were going to have a good year for honey.

HARRY S. CRAIG.

Madison Co., Ind., March 12.

Nice Weather—Prospects Good.

We are having nice warm weather, and the bees are carrying pollen, and a little honey. I examined my bees carefully and find 2 colonies queenless. They are strong, and have lots of honey. We never had better prospects.

We have about 20 or 25 acres of crimson clover, and a few acres of Alsike, and the prospect is good for lots of white clover.

L. A. HAMMOND.

Washington Co., Md., March 3.

Organization in California.

Thus far the prospects are good for a honey crop in this part of the State.

Bee-keepers are watching with considerable interest the progress of the California National Honey-Producers' Association. I think if they have an honest set of officers at the helm, and the Constitution and By-Laws are gotten up with an honest purpose, and the producers will take a proper interest, with a competent manager at the head, something can be accomplished for the good of the fraternity. I know I for one am in favor of organization, as I have had some loss by a commission merchant in San Francisco this season, and it would naturally set one to thinking what is the next best thing to do. But that little word "if" stands in the way quite often in our lives. CHAS. D. BROWN.

Placer Co., Calif., March 3.

Season of 1902—Taking Bees Out.

Last year, from 96 colonies, we got about 13,000 pounds of extracted and comb honey.

Last season, when we had a swarm, father said I could have it if I would hive it, so I went to work and hived it, gave it one frame of comb drawn out, and the remaining 7 of foundation not drawn out. In a few days I looked in and saw the queen was laying, and in about another week I looked in again and saw they had almost all their frames of foundation drawn out; in a few days we put on 24 sections. When we took them off in the fall they had 20 out of the 24 filled with honey of fine quality.

From 96 colonies we increased to 105, and

Tennessee Queens.

Daughters of Select Imported Italian, Select long-tongued (Moore's), and Select, Straight 5-band Queens. Bred 3¼ miles apart, and mated to select drones. No bees owned within 2½ miles; none impure within 3, and but few within 5 miles. No disease. 30 years' experience. WARRANTED QUEENS, 75 cents each; TESTED, $1.50 each. Discount on large orders.

Contracts with dealers a specialty. Discount after July 1st

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100 17 frame-Hive Colonies at ....$3 50 each
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16A1t **G. W. GATES, Bartlett, Tenn.**
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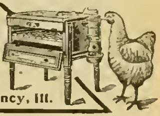

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that the freight rates from Toledo are the lowest of any city in the U.S. We sell

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The Danz. Hive—
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10A17t BELL BRANCH, MICH.

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PAGE Fence at the price of others, we'd have to use their kind of wire. We won't do that.
PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.
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put 48 into the cellar, and left the remaining 57 outside. The ones outside had several flights; if the weather is the same to-morrow we will take those out of the cellar.

In a recent number of the American Bee Journal there were some hints on taking bees out of the cellar. Last spring we took ours out—they were out five or six days, and had some fine flights—when the weather changed, and we had to put them back into the cellar for a few days, when we brought them out for the summer. The flights of those few days saved almost all of the colonies.

FRED BANKER (aged 14).
Brown Co., Minn., March 21.

Wintered Well and Appear Strong.

I am pleased to say that all my colonies wintered well, and appear strong. I have found quite a little capped brood, and queens are laying nicely. F. H. DRAKE.
Worcester Co., Mass., March 10.

Honey Crop Outlook Good.

The outlook for a honey crop is good. White clover is in fine shape, and the bees have wintered in fine condition so far. I have lost but one colony, and still have 110.

THEO. S. HURLEY.
Tama Co., Iowa, March 14.

Some Results of Bee-Keeping.

I like the American Bee Journal very much. I have been keeping bees about five years. I commenced with 2 colonies in box-hives, one of which I have yet. I did not know much about them at first, except what I could pick up from bee-keepers. I put away 12 colonies last fall, and sold about $140 worth of comb honey last year, all white honey. We did not have any fall flow here.

I think beginners should have a text-book and bee-papers. V. VAIL.
Winona Co., Minn., March 23.

Worcester County Convention.

In a former letter I mentioned an immense swarm of bees that had taken possession of an attic-room 50 years ago. At the regular meeting of the Worcester County Bee-Keepers' Association, held March 14, the owner of the building announced that the bees disappeared some time early in the fall, but could not give any reason for it. The room, as it was partitioned off for the bees, was about 8 feet square. It is like a great hive, with comb upon the walls, and all over the original hive, which was placed in the middle of the room. The floor is nearly covered with honey from broken comb, which has fallen from the walls. From this latter fact Pres. Prouty thought that mice or cold weather were to blame for the dismantled condition of the room.

The secretary read a very interesting paper on "Spring Management," by C. S. Blake.

The story of an Illinois bee-keeper's loss of many colonies, resulting from spraying trees during bloom, was related, and the warning given out not to buy spraying outfits from dealers advancing such ideas.

Extracts from a letter from George W. York, relating to black honey, brought to a close one of our best meetings.

Worcester Co., Mass. C. R. RUSSELL.

Longs for Enchanting Forests.

In spring and early summer I long for the lone and enchanting forests of my boyhood days. Their fascinations cling to me, and sometimes almost make me wish to live them over again. At my feet were the dry leaves, the spring flowers and the bees, while in the trees overhead, and all about me, were the beautiful birds of song, happy in the life and liberty given them of God. Then the mother fox would bark at us by day and by night, and the wild deer would shy about in the distance, cropping the herbage here and there. O how the hoot and the screech of the owl, and the howl of the great fierce timber-wolves would make the small boy's hair rise when driving the cows home rather late in the evening from their wanderings in the woods for their daily living.

I wish I had the power to describe to you the charms of visiting some of our great pine forests of those days. I wish some of our old pioneers would in prose or poetry write them up. The young people of to-day have but a slight conception of them in their beauty, imposing height, of their hush in stillness, their sigh and their murmur in a gentle breeze, or of their terrific roar in storm.

S. T. PETTIT.
Ontario, Canada, March 11.

Looked for Cold Weather.

I have 51 colonies of bees, and they have been carrying in pollen for the last 10 days. We are having very nice, warm weather, but I am afraid it is too early for the bees to breed and carry pollen. I am looking for some rough, cold weather yet which I think will be very hard on the bees. WM. REIBER.
Center Co., Pa., March 21.

White Clover Prospects Good.

The white clover has come through the winter in fine condition around here, and the prospects are good for a honey-flow next season.

I put 108 colonies in the cellar the last of November. They are wintering nicely so far.

WM. R. CREASER.
Dunn Co., Wis., March 20.

Moving Bees—Good Prospects.

I have moved 17 colonies of bees with me, and all that were fairly strong came through all right; the weaker ones did not seem to stand it quite so well. Two of them seem very poorly. I just removed the covers and put wire-cloth over them and over the entrance, and they did not seem to suffer when I could keep the car open, which I could not do on account of the smoke from the engine some of the time.

The prospects here are good for a crop of honey this year, judging from the amount of white clover. GEORGE H. WELLS.
Johnson Co., Mo., March 22.

Expects a Favorable Season.

Two years ago I started with 2 colonies of bees, and the following winter lost one from smothering. I kept them in a cellar and did not give them enough ventilation. I now have 5 colonies wintering in the cellar and doing well.

I put up a shelf nearly 3 feet high, and set the 5 hives on this shelf, with blocks under the corners of each hive, raising them about 2 inches. This gives room under the hives to remove all dead bees and litter, and I have had no trouble with them up to the present time.

The temperature of the cellar has not been lower than 45 degrees during the winter. I fed one colony occasionally during the winter because I thought it was a little short of food, and shall continue to feed until time to put them out-of-doors.

I look forward for a favorable season for bees to work, as we had rather a poor season last year, owing to cold and wet weather the forepart of the season and dry the latter part.

This is my first epistle on this subject, and for fear of intruding upon Yon Yonson's time and patience, I will close by saying the American Bee Journal is all right. A. M. DEITZ.
Charlevoix Co., Mich., March 16.

Safe Spring Feeding.

For several years I have used a ⅝-inch cover for my hives during the winter instead of covering the top entirely with burlap. In this board cover I have a circular opening 6 inches in diameter. I lightly tack a piece of wire-cloth over the opening in the fall, put on the winter-case, pour in planer-shavings until they stand 6 inches deep in the center, and I am done with bee-work for five months.

About the second week of March, usually, I remove the shavings from the top of the

Italian Queens,
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We have a strain of bees bred specially for honey-gathering and longevity, at the following prices:
One Untested Queen.....$1.00
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Tested ready now; untested in May. Safe arrival guaranteed. For price on Doz. lots send for catalog. J. L. STRONG,
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That covers the whole Apicultural Field more completely than any other published,
send $1.20 to
Prof. A. J. Cook, Claremont, Cal.,
—FOR HIS—
"Bee-Keeper's Guide."
Liberal Discounts to the Trade.

3-Frame Nuclei For Sale

We are now booking orders for 3-frame Nuclei of Italian Bees, with queens, to be delivered between May 1 and May 15—first come first served. They will be shipped by express from Lee Co., Illinois, about 100 miles west of Chicago. They are on Langstroth frames, and the number of Nuclei is limited. Prices are, f. o. b. starting point—One Nucleus, $3.00; 5 or more at one time, $2.75 each.

GEORGE W. YORK & CO.
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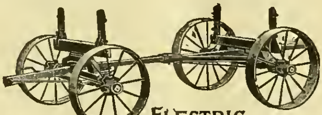

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The ccst of painting the house and barn, out-buildings, bee-hives, and fences is a heavy burden. Cheap paints soon fade, peel or scrape off, and white lead and oil costs so much, and has to be replaced so often that it is a constant expense to keep the bright, clean appearance so desirable in the cozy cottage home or the elegant mansion. The following are a few of the large users of Carrara Paint:

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Carrara is used because it lasts longer, never fades, never cracks, never blisters, never peels, covers more surface than the highest priced paints, and costs less than the cheap mixed paints that injure instead of protect. Carrara Paint is the best possible covering for bee hives, as it does not chalk or peel, and perfectly protects the surface over which it is used, and one painting of Carrara will outlast two of the best white lead. A gallon will cover twenty-five 1½-story hives—two coats. There is but one Carrara. It is made by the Carrara Paint Agency, General Offices, 754 Carrara Bldg., Cincinnati, Ohio, and any one having a house to paint should send for 50 free sample colors and our beautiful booklet, showing many buildings reproduced in all the colors just as they are painted from this great paint that has stood the most rigid tests for 25 years; and bear in mind that it is the only paint ever manufactured that is backed by a positive guarantee in every case. Distributing depots in all principal cities. Write to-day and save half your paint bills in the future.

The Waldorf-Astoria, New York, One of the Most Magnificent Hotels in the World, Has Used Tons and Tons of the World-Famous Carrara Paint.

Please mention Bee Journal when writing.

hives, take off the wire-cloth, and place a saucer about 4½ inches in diameter down in the circular opening and resting upon the frames. I put a piece of cloth in the saucer, allowing it to extend over the sides and touch the frames. Over the saucer I invert a cover about 6 inches square (inside measure) and 2 inches deep. Through this cover I have previously bored a hole large enough to admit a tin tube—an ordinary dipper-handle will make two—then I put back the planer-shavings and my preparations are done. Each evening I pour about five tablespoonfuls of thin syrup down through the tin tube and into the saucer. Nothing is left of the syrup by morning. To read the description it may seem like a good deal of work, but it is all very easy work, and, once made, the articles last forever. I have never yet tried a plan that is so free from messiness and danger of robbing. It is absolutely safe, and I have found it successful in every instance.

"WREXHAM."

CONVENTION NOTICE.

Missouri.—Bee-keepers of Missouri will meet in convention at Moberly, in the Commercial Club Rooms, at 2 o'clock p.m., on April 22, 1903, to organize a Missouri State Bee-Keepers' Association. We expect to complete our organization on that day and have some bee-talks the day following. Everybody is invited who is interested in bees and honey. Let us have a good turn-out and a good time. Good hotel accommodations can be had at $1.00 and $2.00 a day. The Monitor Printing Company will tell you where the Commercial Club rooms are located. W. T. CARY, Acting Secretary.

Wakenda, Mo.

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Standard Italian Queens

OF THE HIGHEST GRADE,

Bred in Separate yards from superior stock of Golden and Leather-colored Strains. Selected from among the best stock of Long Tongue Clover and Honey-Queens in America. Bred by us with the greatest care for business. No disease among our bees. Our elevated country, with its pure mountain air and pure sparkling spring water furnishes the ideal place of health for bees and man. See our circular for the rest.

Queens sent out last season by us arrived in the very best shape, except a few got chilled late in the season in the North. Our Queens have gone to California, Oregon, Canada, Colorado, Cuba, New Mexico, and many of the States. We rear all queens sent out by us from the egg or just-hatched larva; in full colonies. Our method is up-to-date. If you want to know what we have, and what we can do, in the way of fine, large, prolific **QUEENS**, ond how quick we can send them, just give us a trial order.

Prices: Untested Queens, $1.00; 6 for $5.00; 12 for $9.00.

Tested, $2.00; Select, $3.00; Best, $5.00.

Full Colonies, with Tested Queen, $6.00.

3 frame Nuclei, wired Hoffman frames, no Queen, $2.00; 2-frame, no Queen, $1.50. (Add price of Queen wanted to price of Nuclei.)

Special rates on Queens by the 100. Safe arrival and satisfaction guaranteed. Shipping season begins in April. Write for circular. It is FREE. **T. S. HALL,**

13Atf JASPER, PICKENS CO., GA.

The Emerson Binder.

This Emerson stiff-board Binder with cloth back for the American Bee Journal we mail for but 60 cents; or we will send it with the Bee Journal for one year—both for only $1.40. It is a fine thing to preserve the copies of the Journal as fast as they are received. If you have this "Emerson" no further binding is necessary.

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HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, April 7.—Choice to fancy white comb honey sells in a limited way at 15@16c per pound. There is no certain price for other grades, but they sell slowly at 3@5c less per pound. Extracted, 6@7c for white grades; ambers, 5½@6½c. Beeswax, 32c per pound.
R. A. BURNETT & CO.

ALBANY, N. Y., Mar. 14. — Honey demand quiet; receipts and stock light. Comb selling, light, 15c; mixed, 14@15c; dark, 13@14c. Extracted, dark, at 7@7½c. Beeswax firm, 30@32c.
H. R. WRIGHT.

KANSAS CITY, Apr. 2.—Our market is almost bare of comb honey; the demand is good. We quote you as follows: Fancy white comb, 24 sections, $3.50; No. 1, white, $3.40; No. 2, white and amber, $3@3.25. Extracted, white, 6½c; amber, 5½@6c. Beeswax No. 1, per pound, 25c
C. C. CLEMONS & CO.

CINCINNATI, March 11—The demand for extracted honey is good at the following prices: Amber, barrels, 5½@6½c, according to quality; white clover, 8@9c. Fancy comb honey, 15½@16½c. Beeswax strong at 30c.
THE FRED W. MUTH CO.

NEW YORK, April 8.—Comb honey is moving rather slowly of late and prices are somewhat declining. We quote fancy white at from 14@15c; No. 1, white, 13c; amber, 11@12c. Extracted quiet and easy, with plenty of supply. We quote white at 6½@7c; light amber, 5½@6c; dark at 5c. Beeswax steady at 30@31.
HILDRETH & SEGELKEN.

CINCINNATI, April 7—The comb honey market has weakened a little more; is freely offered at following prices: Fancy white, 14@15c; no demand for ambers whatever. The market for extracted has not changed and prices are as follows: Amber in barrels, 5¼@5½c; in cans, 6@6½c; white clover, 8@8½c. Beeswax, 28@30c.
C. H. W. WEBER.

SAN FRANCISCO, Mar. 11.—White comb honey, 12½@13½c; amber, 9@11c; dark, 7@7½c. Extracted, white, 6¾@7¼c; light amber, 5¾@6c; amber, 5@5¼c; dark, 4@4½c. Beeswax, good to choice, light 27@29c; dark, 25@26c.

Demand is fair on local account for water-white, uncandied, but there is not much of this sort obtainable. Market for same is firm at ruling rates. Candied stock and common qualities are going at somewhat irregular and rather easy figures, holders as a rule being desirous of effecting an early clean-up.

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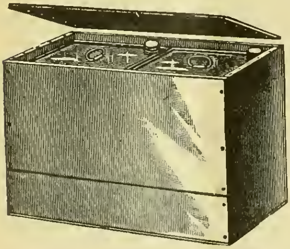

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LOCAL DEALERS.

Besides these dealers who get carload lots there are many local dealers handling supplies for their localities who obtain their supply either at Medina or of one of the above-named jobbers, as may be most convenient. These are dealers in general merchandise, or progressive bee-keepers, or others interested in improved methods of bee-keeping in their locality. If there is such a dealer in your vicinity, it will be to your interest to place your order with him; but be sure to insist on having Root's Goods, and do not accept inferior substitutes.

GEORGE W. YORK & CO. 144 & 146 Erie Street, CHICAGO ILL., are headquarters for ROOT'S BEE-KEEPERS' SUPPLIES IN CHICAGO. Send to them for their free Catalog.

AMERICAN BEE JOURNAL

43d Year. CHICAGO, ILL., APRIL 23, 1903. No. 17.

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Apiary of E. A. MILLER.

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THE AMERICAN BEE JOURNAL.

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EDITOR,
GEORGE W. YORK.

DEPT. EDITORS,
DR. C. C. MILLER, E. E. HASTY, EMMA M. WILSON

IMPORTANT NOTICES.

The Subscription Price of this Journal is $1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

The Wrapper-Label Date of this paper indicates the end of the month to which your subscription is paid. For instance, "dec03" on your label shows that it is paid to the end of December, 1903.

Subscription Receipts.—We do not send a receipt for money sent us to pay subscription, but change the date on your wrapper-label, which shows you that the money has been received and credited.

Advertising Rates will be given upon application.

Weekly Budget.

MR. W. A. PRYAL, of Alameda Co., Calif., wrote us as follows, April 6:

"This is a grand year for this end of California, and from reports it will be so all over the State. We have had abundant rains at the right time. The days are now perfect, and there is a profusion of flowers, wild and cultivated."

◆

A CORRECTION.—In Mr. F. Greiner's article, on page 214, near the end, read as follows instead of the way it was printed:

"Twenty-five years ago honey sold for not materially more, although a very fancy lace-trimmed lot brought me *22 and 23 cents in New York; this year my honey brought*, f. o. b. here, 15 and 16 cents. At this latter price the bulk *of my honey* sold in New York (on commission) in 1876."

◆

MR. H. C. MOREHOUSE, editor of the Rocky Mountain Bee Journal, has lately been adding to his "force." He tells of it in the following paragraph:

> The rapid expansion of our business has made necessary the employment of additional help. We have been looking for some one whom we hoped would prove a capable assistant for some months past, and on Sunday, March 15, he made his appearance. He arrived hatless, coatless, pantless, shirtless, baldheaded, and—nameless. He is nameless still, but is otherwise pretty well provided for so far as his immediate necessities are concerned. We have engaged him to tarry under our roof for at least 21 years, and we shall hope to admit him to an equal partnership at the expiration of that time. As this is the first assistant to the firm of Ourself & Wife, we feel considerably "stuck up" over the the matter, and any discrepancies in this issue of the journal must be attributed to that cause. While our feet are still stumbling over the clods of Mother Earth, our head is (it feels like it is) floating somewhere away up in the etherial blue.

Our congratulations to "The House of Morehouse."

Of course, Mr. M. is excusable for typographical errors this time. "Etherial blue" is "ethereal blue" in this "locality."

◆

MR. TOFIELD LEHMAN and Miss Emma Butikofer, of Fayette Co., Iowa, were married Feb. 17, 1903. A local newspaper, when announcing the happy event, said:

> Mrs. Lehman is a young lady of amiable traits of character, and will make a splendid helpmate. Mr. Lehman is a well-to-do farmer, and a gentleman in every respect.

Mr. Lehman is also a wide-awake bee-keeper, and doubtless that new home will have plenty of the sweet things of life.

◆

APIARY OF A. B. CARPENTER.

A. B. CARPENTER, of Tulare Co., Calif., sent us the picture of his apiary and the following concerning it, dated Feb. 14, 1903:

> I send an amateur photograph of my apiary taken by my son, and finished to put on our Christmas tree last December. I stand on the right, son-in-law next on the left. My wife stands behind a prop, being near-sighted she did not see it. My daughter on the left with a black cat in her arms. In the background is the extracting-house.
>
> I have 90 colonies of bees, and shall lose a few, possibly. There have been but a few days this winter that the bees have not flown more or less. This morning was the coldest of the winter, the mercury 21 degrees above zero; at noon the bees were flying more or less. The apiary is under two silkworm mulberry trees. The shade will measure 26 by 18 yards. They grow yearly long enough to place a row of stands around the outside. The trees have to be propped strongly to hold them up. When in full foliage they make a dense shade, and, of course, it is pleasant working under them in the hottest weather.
>
> With me, last year was not a remarkably prosperous one. I do not know that I can be called more than an amateur, having had only four years experience with the extractor, and two years previously with comb honey. I love to work with the bees, but it begins to be heavy work for me at 75 years of age.
>
> A. B. CARPENTER.

Through an error made by our engraver, the picture of Mr. Carpenter's apiary was made only about half the size we had intended. It must be a cool, shady spot in which to work with the bees when the trees are in full foliage.

Dr. Miller's New Book

SENT BY RETURN MAIL.

The book contains 328 pages, is bound in handsome cloth, with gold letters and design; it is printed on best book-paper, and illustrated with over 100 beautiful original half-tone pictures, taken by Dr. Miller himself. It is unique in this regard.

The first few pages of the new book are devoted to an interesting biographical sketch of Dr. Miller, telling how he happened to get into bee-keeping. Seventeen years ago he wrote a small book, called "A Year Among the Bees," but that little work has been out of print for a number of years. While some of the matter used in the former book is found in the new one, it all reads like a good new story of successful bee-keeping by one of the masters, and shows in minutest detail just how Dr. Miller does things with bees.

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AMERICAN BEE JOURNAL
THE OLDEST BEE-PAPER IN AMERICA

43d YEAR. CHICAGO, ILL., APRIL 23, 1903. No. 17.

Editorial Comments.

Ignorance About Bees.—Arthur C. Miller seems to be stirring up trouble by hinting in the strongest kind of a way that we don't yet know all about bees, and that what we don't know isn't always so. He seems to be wanting in respect for accepted traditions. For example, we all "know" that bees pack pollen in the cells by butting their heads against it after the fashion of a belligerent ram. To be sure, none of us ever saw a bee in the very act, and we never took the trouble to discuss whether it was a reasonable belief or not, but we've read it, and then it was easier to go right along believing it than to take the trouble to think about it.

Now, see the irreverent manner in which that fellow, Miller, goes for that venerable tradition, in the American Bee-Keeper:

> As the pellets of pollen are dropped on the floor of the cell by the gathering bee, a mere ramming in by the head of any bee would pack it very unevenly, much at the lower side and little or none at the upper, a consideration which heretofore seems never to have attracted attention. Also, as every organ is adapted to its particular function, we should expect to find the front of the bee's head hard and smooth, if it was intended and used for this purpose; whereas it bears a pair of delicately articulated antennæ, and simple and compound eyes protected by a multitude of fine hairs, surely anything but a battering-ram.
>
> As a matter of fact, the pollen is packed by the bee with its mandibles, and is a process of pushing, kneading, and spreading. The work can often be found in an incomplete stage, and the pollen will then be found thickest at the lower part of the cell, but it does not remain so, for that, or the next lot, will be worked into the upper part, making all even.

Bulk Comb Honey (comb honey cut out of the frames and packed in cans or other vessels and filled out with extracted honey) is strongly advocated by H. H. Hyde in an article in the Bee-Keepers' Review, in which he says:

> It has been demonstrated time and again that bees will store all the way from 50 percent to 100 percent more honey when worked for bulk comb than they will when worked for section honey, and many believe (the writer included) that where the bees are worked as outlined above, nearly, if not quite, as much bulk-comb honey can be produced as could be produced of extracted honey alone; and especially does this hold good where the localities have fast flows of honey, in which a great amount of wax is always secreted whether there are any combs to build or not.

If it is true that an average of 75 percent more bulk than section honey can be produced, and if the bulk can be sold for 57 percent as much as the section honey—to make it a little more concrete, if the bulk brings 8 4-7 when the section brings 15 cents—then the scales will promptly turn in favor of the bulk, for the amount of money received will be the same in either case, while the outlay of money and labor will be less for the bulk.

There may, however, be some question whether in other localities than that of Mr. Hyde would the proportion of bulk to section honey be so great. Many would probably find that they could secure very nearly as much honey in sections as in full frames, and in this same article Mr. Hyde assures us that it requires as much skill and as fine a grade of honey for bulk as for section honey. Of course, however, there must be figured in favor of the bulk the amount of extracted packed with it.

Each one must decide for himself as to the proportionate amount of honey he can secure, and the relative price in his market.

DEATH OF DR. E. GALLUP.

On Monday morning, April 13, we received the following letter announcing the death of Dr. Gallup:

> ORANGE CO., CALIF., April 7, 1903.
>
> EDITOR YORK:—My father, Dr. E. Gallup, died Sunday, April 5, at 3 o'clock. He had been sick in bed about six weeks, but had been failing in health for about two years. He would have been 83 years of age on the 22d of next August.
>
> I have 14 colonies of bees now, 3 of this year's swarms, one having come out to-day at 1 o'clock. Bees have just begun to store.
>
> Yours sincerely, HERBERT S. GALLUP (aged 16).

So Death, the ruthless reaper, has cut off another of the old-time bee-keepers—this time one of the very earliest writers on bees in this country, as well as one of the very latest writers, for only last week we published an article from his pen, and still have one more, which will appear soon.

Dr. Gallup was always a good friend of the American Bee Journal. He rendered it noble service at times when such service was of untold value—before either Mr. Newman or its present editor took hold of it. At one time, in its early years, his timely aid seems to have saved it from what might have been a total collapse.

For a number of years Dr. Gallup's name disappeared from the printed pages of the bee-papers. Just why, we do not know, unless it was that he was almost entirely out of bee-keeping during those years. But about 10 years ago we saw his name somewhere, and decided to resurrect him as a writer if we could, and so wrote to him. The result is well known to all who have been regular readers of the American Bee Journal for the past few years.

Dr. Gallup was Mr. Doolittle's teacher in bee-keeping, over 30 years ago, and his book, "Scientific Queen-Rearing," was dedicated to him.

A few biographical notes would doubtless be interesting to all, which were pubished in these columns in 1893, having also appeared in a bee-paper (now extinct) in 1870:

> Elisha Gallup was born on Aug. 22, 1820, in the town of Melbourne, county of Sherbrook, Canada East. His parents were born in Connecticut, on Long Island Sound. By occupation he is a farmer, with the exception of eleven years a miller. He removed to Wisconsin in 1859, and settled in the town of Metomen, Fond du Lac county. In June, 1865, he removed to Mitchell county, Iowa. And now, in the fear that we may not do justice, we will here introduce friend Gallup, and let him speak for himself:
>
> "From my earliest youth I have been an enthusiastic admirer of the busy bee; in fact, my earliest recollections are of the bees and bee-hives. Often have I heard my mother say, if she lost me when a little fellow, she was sure to find me by the bee-hives. My intense desire to learn and investigate the bees in every particular has been such that I have dreamed of them at night, and thought of them in my waking hours to an almost absorbing extent, and to-day I am still a student; and I find those persons who proclaim themselves *finished* in every branch, are the ones who in reality *know* the least.
>
> "My early advantages were of a limited nature in the way of education—scarcely common-school advantages did I have. My first reading upon the subject of bees was a small pamphlet written by a Mr. Weeks, of Vermont, which abounded in errors. My next was a work by Mr. T. B. Miner. I picked up my first real insight into the true system of bee-keeping from an old German by the name of Wellhuysen. He made 125 colonies from one in two seasons. And here I will remark that I have been suspected of getting my knowledge upon the subject of bee-culture from Mr. Langstroth's work; but to settle that matter quickly and satisfactorily, I have never been known to quote from Mr. L.; neither could I have done so, from the fact I had it not to quote from. Once I remember to have had the privilege of skimming through it one evening, at the house of a friend, and that was merely to see if there were any new ideas put forth.
>
> "Eight years ago last season (in 1861) I obtained my first movable-comb hive. My progress from that time I felt was rapid, from using a glass observatory hive of a single comb, for several seasons in Canada, of my own getting up. In my own opinion, the movable-comb hive is very far superior.
>
> "Mr. Quinby's first edition of his book struck me as being excel-

lent; and when I saw an advertisement of his second edition, knowing that he had the advantages of the movable combs, I looked forward with confidence, and expected to see some questions fully discussed by him which I considered of vital importance; and when I obtained the book and found that it had almost stood still, and those questions not even mentioned, I was disappointed in the work, and this determined my course to some extent.

"For the purpose of fitting myself to appear before the reading world, I attended writing school, so as to accomplish myself in at least writing a legible hand. This was in the winter of 1865-66. As you say, you are somewhat familiar with my writings, I leave you to judge of my success. My disadvantages at my time of life I fully appreciated; but being a man who has the fortitude not to look back when the hill has once begun to be climbed, my ambition and energy kept me ever on the onward path. I commenced first to write for the American Bee Journal, and to-day my private correspondence would fill a goodly-sized volume, of which I am proud—with innumerable testimonials from different parts of the United States and Canada, and from those who were entire strangers, which enhances their value, being assured it is not flattery."

In a letter written to us, dated July 20, 1893, which we published Aug. 10, 1903, Dr. Gallup said this:

"I have but very little time at command now to reply to your request, but I send you a photo which I had taken about three months ago. All my friends say it looks older than I really do. Every one says that I hold my age *remarkably*. I know that many a young man does not show the activity that I do.

"Of course, I am not in the bee-business now, but I still take a great interest in the business, and when I see a couple of boys managing an apiary and taking out 20 tons of honey this season, and others in proportion, it makes me sort of hanker after the bees as of old.

"My second wife died last March, and left me with three little ones—the oldest six years, and the youngest two years—and I am caring for them without the assistance of a woman. I will be 73 years old the 22d of next month, and I am still strong and hearty, and, to all appearance, good for some time yet.

"I left Iowa completely broken down, both mentally and physically, and I have regained both in this grand and glorious climate. I was fully determined to go into the bee-business here, and did make a start, but the demand for my services as a hygienic and common-sense doctor has been such that I *could not* get out of the business, and to carry on the two was impossible.

"I feel now that I *must* live to care for my little boys and girl. They are the comfort of my old age. DR. E. GALLUP."

The children left by Dr. Gallup will have the sympathy of all bee-keepers in their lonesomeness and bereavement. They can have the encouraging feeling that their father was an important factor in the development of progressive and practical bee-culture in its infancy, when Langstroth, and Quinby, and Grimm, were also laboring to place the industry of bee-keeping on a sure foundation.

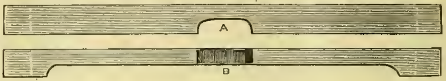
Curing Foul Brood in Early Spring.—M. A. Gill has a profitable cure for each foul-broody colony just so long as hives hold out in which *healthy* colonies have died the preceding winter. Here is the bill of particulars as given in the Bee-Keepers' Review:

> Early in the spring, before the colony has expended much energy in rearing brood to die, I drive the bees from the foul-broody colonies into an empty hive or super, and set them away in some convenient place for 28 to 36 hours. Then, after warming up one of my hives of combs and honey I sprinkle the bees, which, by this time, may be a little sluggish, and after they have fed each other and become lively, I run them into the hive above mentioned.
>
> Of course, there is nothing new nor remarkable about this cure, only that you have cured your diseased colony; and have done it at a time when they can build up rapidly, as all their brood will hatch instead of perhaps only 40 percent. You have also used your empty combs to the best advantage, and shut off the chances of a diseased colony being robbed out during the dearth of spring, by perhaps two or more of your healthy ones.

Uniting Weak Colonies in Spring.—A beginner, who has a number of weak colonies in the spring, is likely to think he will help matters by uniting them. Those of more experience know that a number of very weak colonies united in the spring will disappear in just the same time as if left separate, but that there is some gain by uniting one or more such weaklings or dwindlers with a fairly strong colony. They have learned this from experience, but perhaps no one has heretofore given the reason why. The following from Arthur C. Miller in Gleanings in Bee-Culture is refreshing;

> A colony weak in the spring is composed very largely or entirely of old bees. They must keep warm, gather food, and rear brood. Each day their numbers decrease rapidly, and but few young bees are hatched to take their place. The old bees are enfeebled; they easily succumb to the adverse weather conditions, and wear out quickly, the effort to keep warm and rear brood being too much for them to do successfully. Unite several such colonies, and you have not materially changed the conditions. It is just as hard for them to feed brood; nearly as much energy is required to keep the necessary heat, and their death-rate is the *sum* of that of the individual colonies. But put one or more such weaklings with a good colony, the old bees are at once relieved of all nurse duty, and of playing furnace. They start out from a warm hive, and can put every bit of their waning strength into gathering nectar, the usual work of such bees under normal conditions. While they last they are a real aid to the strong colony; and when they are gone, young bees nourished by the nectar they have gathered, are ready to take their places.
>
> Uniting in the fall is generally done under reversed conditions. The bees are almost always young, or a large part of them are; brood-rearing is decreasing, and field-labor is about over, consequently a combination then of several small colonies into one good-sized one is successful if done early enough.

A Hive-Entrance Reducer, gotten up by Mr. L. M. Gilbert, of Dupage Co., Ill., is described as follows:

> The engraving herewith represents a piece of wood 7/8 of an inch square and 14¼ inches long, with a space cut out on one side 3/8 of an inch by 11 inches (B in the illustration), and on one adjoining side 3/8 of an inch by 2 inches (A in the illustration). and is designed as a reducer for the deep entrance of the Danzenbaker bottom-board, the combined bottom-board and hive-stand, or any entrance of 7/8 inch or less in depth.
>
> 
>
>
> This is to be placed on the bottom-board with cut-out down, and pushed under the front of the hive-body even with the front.
>
> A small staple or nail driven on the inside of each side-piece of the bottom-board, and on a line with the inside of the front of the hive, will prevent it going under too far.
>
> If using the 3/8-inch side of a reversible bottom-board, and wishing to reduce the entrance, it can be placed flat side against the front of the hive with the small opening down. With the deep entrance and one of the spacing sticks you can have any one of three size openings. The spaces may be varied to suit the individual.
>
> Without the use of a bee-veil, or disturbing the bees in any way, you can walk up to the side of the hive and remove or place in position one of the reducers at ten or more hives in the same time that you could lift a hive from the bottom-board, reverse it, and set the hive back in place.
>
> If the stick is not in use it can be left on the cover, and will be always at hand when needed. The length, as given above, is for a 10-frame hive, but if one inch is cut off of each end it will fit an 8-frame hive.
>
> One hundred of these sticks make a package only 9 inches square and 14¼ inches long. L. M. GILBERT.

Why Demand for Honey Sometimes Falls Off.—Here are some words of M. Moyer, in Gleanings in Bee-Culture, that some bee-keepers ought to paste in their hats and read over semi-frequently:

> At present it seems to be the aim of bee-keepers to get their honey off their hands at the highest prices, and care very little what becomes of it after that. They have not studied sufficiently the importance of creating a greater demand for their goods. A pail of good honey, sold in good condition, will create a demand for another one; but if it does not give satisfaction it spoils the sale of perhaps a dozen. I know from personal experience that families averaged 10 pounds a month as long as they got a good article, and that one pail of inferior cut off that demand for a whole year. They imagined they got tired of honey, when the fact was the honey was not up to the mark.

Honey as a Health-Food is the name of a 16-page leaflet (3½x6 inches) which is designed to help increase the demand and sale of honey. The first part is devoted to a consideration of "Honey as Food," written by Dr. C. C. Miller. The last part contains "Honey-Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by every one who has honey for sale. It is almost certain to make good customers for honey. We know, for we are using it ourselves.

PRICES, prepaid—Sample for 2 cts.; 10 for 10 cts.; 25 for 20 cts.; 50 for 35 cts.; 100 for 65 cts.; 250 for $1.50; 500 for $2.75; 1000 for $5.00. If you wish your business card printed at the bottom of the front page, add 25 cts. to your order.

Maple Sugar and the Sugar Bush, by Prof. A. J. Cook; 44 pages; price, postpaid, 30 cents. This is by the same author as "The Bee-Keepers' Guide," and is most valuable to all who are interested in the product of our sugar-maples. No one who makes maple sugar or syrup should be without it. Order from the office of the American Bee Journal.

Convention Proceedings.

Chicago-Northwestern Convention.

Report of the Chicago-Northwestern Bee-Keepers' Convention, held in Chicago, Dec. 3 and 4, 1902.

BY OUR OWN SHORTHAND REPORTER.

(Continued from page 245.)

FOUL BROOD—ITS CAUSE AND CURE.

A Member—That larva that lies down against the side of the cell, is that after the cell is capped?

Mr. France—It has probably been capped; it is beginning to have this sunken appearance, and about to begin that perforation in there?

A Member—Then you can not detect foul brood in cells that have never been capped?

Mr. France—I should usually say no, unless you have been schooling yourself on this, and looking for it before hand.

A Member—Would the introduction of the queen from a foul-broody colony received through the mails introduce foul brood?

Mr. France—Well, I am not a queen-breeder, nor don't want to affect any one's market. I will say yes and no; no, providing you take that queen-bee and introduce her in a clean cage and destroy the cage that she came in. Right on that point: In the largest county of our State we had a peculiar case. There were some 40 odd hives, new that season from a supply house, that had never had bees in them; he had put his new swarms in them; the old queens were not desirable ones; he sent to one of our distant cities for some queens—five of them—and introduced them in the cages they came in. After a time he wrote me that there was something wrong in those hives, and so remarkable an instance was it, that it was every other all in one row, it excited my curiosity. How could it be so, and what was the cause? No other bees in the vicinity were diseased. Why should these be, and in that peculiar way? Finally I learned that these five queens had been introduced in those same hives; then I said, "You put it there. Where did you get your queens?" He told me, and I said, "That apiary is diseased; I know it has been for some time."

I have answered a good many questions in our State, and I have written out the answers and questions, making them very short, and will read them; they may be of help to some one here:

QUESTIONS AND ANSWERS ON FOUL BROOD.

1. How does foul brood become contagious? By robber-bees getting diseased honey.

2. Do the germs float in the air and thus spread? No. Often bees hatch from diseased combs.

3. Are any combs from a diseased colony safe to use? If so, what and where? Combs above a queen-excluder, or those never having had brood in are generally safe if they have been cleaned out by the bees and exposed to the air for some time. They need careful inspection before using; also after.

4. Is honey from diseased hives safe for people to use? Yes, but not desirable.

5. Can honey from diseased combs be safely fed to bees? Yes, if *boiled* first. By that word boiled, I mean the honey boiled—all to boil, and stir it while boiling.

6. Is foundation from diseased combs safe to use? Yes. I proved this in 82 trials.

7. Does foul brood affect adult bees? I think not much. They gather honey and swarm.

8. How long will it take foul brood to destroy an apiary? That depends upon conditions, seasons, etc. I know of 108 colonies, strong in April, and all dead inside of one year. Others were diseased more or less for 12 years, but they had fair management that saved them. Usually one to three years.

9. Will a queen from a diseased colony produce diseased brood? No; but I know of several cases where the introduction of foreign queens in the cages they came in caused disease. It is not safe to use foreign cages to introduce queens in. Put the queen in a clean cage on arrival, and burn the other and bees in it.

10. Is honey stored above the brood in boxes or super-combs safe to use? Yes, for people, and possibly for bees. I know it is if boiled before using.

11. Are super-combs partly drawn out over diseased brood, that have not had honey stored in them, safe to use? Yes, as a rule.

12. Is there any danger of using tools that have been used in handling diseased bees? Yes, if they have become soiled or stained with honey from the diseased hive.

13. How do you disinfect such? Plenty of hot water kills the germs

14. Can you cure this disease late in the fall. If so, how? If you have plenty of sealed honey in healthy combs, after brood-rearing is over, place the combs in a clean hive and drive the bees in it with smoke, or, better, brush them from the combs into the new hive, and the colony is cured. The diseased combs to be treated later. But if you have not the above, and the bees have a good supply of honey and bees, they will winter, and then treat them next spring. Take great care that no robber-bees enter the hives.

15. What harm is it if you make public the names of places diseased, or owners of such bees? Allow me to illustrate: Your bees are diseased; you sell queens; I make public foul brood among your bees. How many queens would you sell? The same is true in the sale of honey. On the other hand, we at once cure the bees, and everything is perfectly safe—then your business is as before. The National Association can do a good deal in this line some day.

16. Is it necessary to burn anything to cure foul brood? *No.* But often it is good economy. It all depends upon surrounding conditions.

17. How do you cleanse a diseased hive to make it safe to use again? Generally all that is needed is to scrape the inside of the hive. But if honey has been soaked into the lumber I would use some boiling water. The danger, as a rule, is not in the hive. Wm. McEvoy has cured thousands of cases and not scalded the hives.

18. Is there any danger of buying combs to use? Yes. I know of many cases where that was the means of contracting disease. Also using implements from strangers.

19. Is solar or sun extracted wax, honey, or the refuse from such, safe to use? No, not if any diseased combs were in the extractor. It is not hot enough.

20. Is there any danger in buying second-hand honey-cans or barrels? Yes. And I want to say second-hand goods of any kind are poor property to store honey in. Especially the 60-pound tin can, if emptied by manufacturers.

21. Will pickled brood, or black brood, produce foul brood? No. They are separate and a different germ. They are not liable to be in the same hive. Small-pox will not produce diphtheria, scarlet fever, or typhoid fever.

22. Can foul brood be cured by abundant feeding? *No,* so long as there is an abundance of feed coming in, either from natural sources or from feeders. When the supply stops, and brood is fed from stored honey from a diseased cell, said larvæ will become diseased and die.

23. Will a foul-broody colony swarm? Yes, it is often the case. Diseased lightly.

24. Will a diseased colony carry disease while swarming? Yes, it is liable to do so.

25. If such a colony goes to the woods, will that bee-tree be diseased? *No.* I have proven this in four cases at least. Said bees are without any combs or even foundation in the tree until they have produced it, and by that time they have consumed what diseased honey they took with them.

26. How, then, can a bee-tree become diseased? By the bees from the tree robbing some diseased colony.

27. In a locality where foul brood exists, if all diseased colonies are treated, is there not great danger from diseased bee-trees near by? *No.* A diseased bee-tree will soon have no live bees, and the squirrels and bee-moths will soon dispose of everything in the tree. This I have also proven in several cases.

28. Are any of the drug treatments a sure cure? *No.* They only check it for a time.

29. Is there any sure-cure method? The McEvoy treatment cures every time, if carefully followed.

30. What is the real cause of foul brood? It is hard to tell. We know conditions where it produced disease.

31. If my bees are diseased what will it cost to cure them? and can I expect anything from them the same sea-

son? In Wisconsin it costs the bee-keeper about 25 cents per colony; also my board for one or two meals, if I help him. We save the wax, honey, hives, and bees, losing only the brood at the time of treating. I take as my baggage a latest improved wax-press, and it is freely used. Every bee-keeper should have one. In an apiary I inspected the first of July every colony was more or less diseased. I gave instructions what to do; the owner did as directed; I returned 23 days later—hives full of combs and brood, and 48 finished sections per hive. Basswood bloom.

32. If there is no disease in our part of the country why do we need any one to inspect our bees? You do not know the condition of your neighbors' bees—no, not so well as your bees do. There is too much exchanging among bee-keepers, and buying queens and other supplies from strangers.

33. Should every State have legislation on foul brood? Yes. If so, and the laws are enforced, the disease would soon be gone.

34. How can legislation be secured? Very easily. All join your State Association, and through that you can get what you ask for. Of course, all such will belong to the National Bee-Keepers' Association.

A Member—Will bees that are diseased by foul brood show more viciousness, and more easily attack a person that raps on the hive?

Mr. France—No, sir, I think not; if anything there will be a tendency, I think, the other way.

(Continued next week.)

Contributed Articles.

Emptying Unfinished Sections and Using for Baits.

BY G. M. DOOLITTLE.

I QUITE like that department of "Our Bee-Keeping Sisters" in the American Bee Journal. It is all of it good reading, very interesting, and a help to the men as well as to the women. But there is a sentence on page 199 that I cannot understand, and when I do not understand a thing I am almost sure to ask, "Why?" The sentence is this:

"We want our sections all emptied in the fall, as we use them for bait-sections, and would consider them spoiled for that purpose if the honey was allowed to candy in them, as it will be sure to do if left till spring."

Now what I want to know is, *Why* would Miss Wilson consider bait-sections spoiled because honey had candied in them? Will she please tell us in her department, and then we can all know of this matter?

With the exception of one year, I have always left my partly filled sections till spring to be cleaned out, and if they are spoiled for baits for this reason, I did not know it. And the honey always candies in them to a greater or less extent, the same as she hints at its doing in Illinois.

One year I tried the "robbing" plan in the fall, and supposed I followed the directions given for this job to a 'T, but when I came to overhaul the supers I found fully one-fourth of the combs in them so torn that they were practically spoiled as far as their being of any use for baits. I then decided that I would follow my old plan of having them cleaned in the spring; and now Miss Wilson tells me they will be spoiled if I do this.

One of the reasons for my leaving them till spring is that the bees are *always* sure to clean them, and that without tearing the combs in them, by placing them over almost any colony of bees; but if so placed in the fall they will often fail to clean them, and so I have to remove them partially cleaned when I come to prepare the bees for winter.

The second reason why I leave them for spring is, that I can at this time feed any colony which may be short of stores, and to do it in a way that will stimulate brood-rearing to such an extent that I often gain more from the brood thus reared (when turned into bees for the honey harvest) than the honey would be worth for any other purpose. With the fall "robbing" plan we cannot feed the colonies we want to; in fact the larger part of the honey thus fed is gotten by just the colonies which do not need it at all.

The way I do this spring feeding to have sections cleaned out is to put a sheet of enameled cloth, the size of the top of the hive, over the frames, and on this placed a "bee-quilt," so that the enameled cloth will be kept warm, and thus drops of water will not form on the outside, as it will if only the enameled cloth is used, on cool nights.

This enameled cloth has one of the front corners turned up so that a few bees can pass through at a time, and on this is set a super of wide frames—to the number used when full, lacking one—and these are spread about a bee-space apart. On this super is set the super of part-filled sections, the sealed part of which has the sealing broken with a wire hair-brush, or by passing a table-knife flatwise over the capping. This allows the honey which drips from the broken cells to fall down on the wide frames, and then dripping down through them and over them on to the enameled cloth below, to an extent sufficient to rouse the bees to great activity; and the carrying of the honey causes them to feed the queen, and she in turn lays lots of eggs, while the excitement of the whole keeps the brood-chamber up to that point of heat at which brood-rearing is carried on to the best advantage.

Opening hives a week after they have been so treated, I have found them with more than doubled brood, and thought I was doing a nice thing in this way. But Miss Wilson says not.

The combs are left on till I want them for use, when this super of cleaned sections is raised up (as we do in taking off filled supers), a bee-escape board slipped under, and the next day or two the whole is taken off free from bees; and, so far as I can see, in perfect condition in every way. And why should this not be so? Why are they not cleaned as perfectly as by the fall robbing plan? Allow me to ask Miss Wilson if she has tried bait-sections cleaned in the fall and those cleaned in the spring, side by side in the supers during the next honey harvest? If so, could you detect any difference between those cleaned in the fall and those cleaned in the spring, after both were filled with new honey? I have tried this, and I could not detect the least particle of difference in any way, shape or manner.

Can't the bees clean sections or the cells of the honey-comb as clean in the spring as in the fall? They always do, so far as I know. Can't they clean them CLEAN and free from honey, whether candied or otherwise, in the spring, summer, or fall? I know it has been claimed that all the candied honey is not cleaned out, and hence the new honey in spring-cleaned sections is tainted by the old candied honey, and thus the new is made to candy in the combs. But all of my experience goes to prove that such claim is a fallacy?

Did Miss Wilson say what she did, from a belief in this old assertion, taking it for granted that it was true? or has she other reasons for the sentence quoted? If other reasons the whole bee-fraternity stands "agape" for those reasons.

I consider this thought, that no section should be used after honey has candied in the cells of the comb therein, as a relic of the past, when it was asserted by some that the whole section once having been worked in by the bees so as to store it partly full, was fit for nothing hence forward but to melt up the comb and make fire-wood of the wood part. I fought such advocacy of waste, at the time, as did others, and supposed the whole idea had been dropped, till I noted that sentence from the pen of Miss Wilson.

Now if spring-cleaned sections are just as good as those cleaned in the fall, bee-keepers want to know it. From my own experience, by testing the two side by side several different times, *I* say they are. What substantial proof can be given saying they are not? It is not sufficient to say we have known honey to candy in them. So have I known it to candy in newly-built combs, and those fall-cleaned, and in some seasons quicker than in others. But I have never known of it candying any quicker in the sections which were cleaned in the spring than in those cleaned in the fall. If the spring-cleaned are just as good, there is much advantage in leaving the part-filled sections to be cleaned at that time, as all bee-keepers will readily see without my taking time to enumerate the advantages here more than I have done in the above.

There was a time when it was said that comb foundation in sections was of little advantage unless it could be put in the same *right fresh from the mill*, and immediately on the hives. This I fought also, and proved by testing the fresh and that four years old, side by side, that the bees accepted one as quickly and as readily as the other; and everybody now purchases foundation at any time of the year when most convenient, which is a help to them and the manufacturers, much above what it would have been to have clung to a fallacy repeated o'er and o'er, first made by some one who only *guessed* that he was telling the truth. And I expect that this matter of *only fall-cleaned sections* will turn out the same way when *careful experiments* are made along this line. Onondaga Co., N. Y.

Sulphuring Honey to Protect from Bee-Moths.

BY D. M. KETCHAM.

I OFTEN notice in the American Bee Journal references to fumes of sulphur having injurious effect on honey-comb and not killing the larvæ of bee-moths. As I have acquired some experience of value to me on this subject, I will give it to benefit other readers.

There seems to be a difference of opinion among bee-keepers in using the fumes of sulphur to kill the larvæ of the bee-moth, while others object to its use on account of coloring the comb and thus reducing its value when placed on the market.

In 1870 we had four apiaries that averaged 55 colonies each, and at that time we used a four-pound box containing two combs, and after taking the boxes of honey from the hives and keeping it from the larvæ of the bee-moth until sold was to me a disappointment, one way or the other. If we sulphured it, it looked yellow, green and white—rainbow like—didn't please the eye, and brought less money. If we did not use sulphur the larvæ of the bee-moth made many boxes unfit to place on the market.

But in sulphuring we noticed some of the combs yellow or green, while other combs remained white and free from color. This set us to thinking that there was a right way and a wrong way of doing things. We worked hard to find the right way, for we believe it pays well to learn which way that is.

After experimenting a great deal, and learning nothing of value, one morning, very early in the wee hours, I awoke with my head full of "bee-biz." And it appeared to me the damp or wet combs only were colored by the fumes in sulphuring. So that very morning we took 20 boxes of honey and placed them on the table near an open window so the wind would blow all about them, and left them there until 2 p.m. Then they were taken to the house used for sulphuring and placed on the racks. Then 20 boxes of honey was selected that was damp, or "sweating," as it is called, and placed in the house on racks opposite the other 20 first taken there.

The house used for sulphuring was 6 feet square and 7 feet high. A hole was dug outside, extending under the house, and bricked up, and this is where 24 ounces of brimstone was burned for one hour. Then the door was opened, with the results obtained.

Since that experiment we have not had any colored comb or section honey damaged by the larvæ of the bee-moth. It was a success.

Please gently inform Dr. Miller that it will kill them every time. (Page 695—1901). Say, Doctor, what about those fellows an inch long? My boys say if we would let them grow to be that size our combs would all have a "veil" over them. Wayne Co., N. Y.

Starting and Managing Out-Apiaries.

BY C. P. DADANT.

> "Will you please tell me whether you think it will pay me to start an out-apiary about three miles from my home yard? Can I profitably keep 50 colonies in each place? I like the bee-business and have succeeded in wintering my bees for ten winters with a loss of only 3 or 4 colonies, and have now 48 colonies in the cellar. Don't you think it will be a good honey-year? I produce only extracted honey.—T. L., Fayette Co., Iowa.

I believe it will always pay a man to keep bees in a fairly good country, if he likes the business and enjoys it. Even if he hasn't much liking for it, if he has determination and is not afraid of the stings, and is careful and industrious, he can make bee-keeping pay.

When I was a boy I had no liking for bee-culture. The stings proved exceedingly painful, and although my father was always at his bees and spent a goodly portion of his time watching them and overhauling them, I often asserted that I would never be a bee-keeper. But when I became 18 years old, my father happened to take sick with hay-fever during the very best honey-flow that I have ever seen. He asked me to go to the bees. So I fixed myself up and summoned my courage and went to work. What I saw in the apiary during the few hours of that day's work made a bee-keeper of me. The hives were literally running over with honey. Some colonies that had no supers had managed to find their way into the cap and had built snow-white combs running the entire length of that cap and those combs were shining with honey. Hives that had been provided with supers, probably because their colonies were stronger, had those supers full; one or two colonies had begun work under the bottom-board, and two or three swarms, harvested a week or so previously, had their hive-bodies about full and were ready for supers. I went to work with a will, tried to follow instructions as to the proper handling, and found it was pleasant work, after all.

I must remind you, however, that bees are very much more peacable when harvesting large quantities of honey than at other times, so I did not become too much discouraged at first with stings, and after awhile I had become so inoculated that the stings were no longer dreaded.

From that day on there were two bee-keepers in our home, instead of one. But I did not have the patience of investigation that my father had. I was willing, however, to work under his instructions. We had a big crop that year, but the following one was bad. Still we kept on, and within three or four years we had enough bees to make it necessary to start an out-apiary.

Our aim has always been to keep about 80 colonies in one spot. Whenever the number exceeded this quantity, we began colonizing in a new apiary. We usually started with from 20 to 35 colonies in the new place, increasing by artificial or natural swarming as occasion offered. We used a few small hives at first, but gradually changed them into larger ones. Little by little we increased until we became possessors of six apiaries, numbering between 400 and 500 colonies. But we have long since decreased from that number. Other things demanded our attention, and we were compelled to trust the handling of the bees to other hands.

There is an undoubted profit in handling bees on a large scale. We have had several crops that have netted us, all labor paid, from $2,500 to $2,800 in honey and wax. The outlay is small, but it takes a determination to attend to the work, at the proper time and in the proper way.

Some men never succeed with bees because they lack the knowledge of some of the most simple requirements, or because they do not employ good judgment. For instance, I have seen a bee-keeper, whom I had thought a practical man, take three combs out of a hive of bees and return them wrong end foremost and improperly placed. That is, in replacing the combs in the hive he put the honey at the front, when it should be at the rear—the place where the bees usually put it so as to defend it against intruders; and he placed a comb of brood on the outside of the cluster, separating it from the others with a comb of honey. It was at a season when the brood should be kept together so as to be cared for easily, the weather being cool. Either this man had no judgment, or he was unaware of the necessary precautions in handling bees. This is seemingly a trifling matter, but it constitutes the difference between the successful apiarist and the unsuccessful one. If you have kept bees for ten years and have succeeded well, I will vouch these small matters have caught your eye, that you know how and when to open your hives, and that when you leave an apiary for a week or more, you can feel reasonably sure that nothing will suffer in your absence unless some accident happens. That is one of the requirements in the establishment of an out-apiary. We cannot be there continually, and at each visit the hives must be left in such shape that we may be confident that there will be no robbing of a weak colony, no starving of a destitute one, nor any lack of room in the supers during a heavy flow.

Of course the bees must be located near some house, so that possible swarms may be harvested. But I see that in one of the best honey-producing sections that I have ever visited (in Colorado), they do not think it necessary to put their bees near a house. The out-apiaries there are most usually placed in the middle of an orchard, or in some corner of a field, or under some cottonwoods, without any attention, except from the owner, who comes to them from time to time.

The production of extracted honey in an out-apiary is a very good method, and I will speak on this matter in some future article.

1903 PROSPECTS AS A HONEY-YEAR.

Do I think this will be a good honey-year? Yes, I do, as much as I may be able to judge. The white clover has not been so bright and as plentiful as it is now for 12 to 13 years. But, for all that, we can never be sure of a good season ahead of time. The causes that make the nectar to appear in the blossoms are beyond human knowledge thus far. We all have an indistinct idea that it takes warmth, moisture and an atmosphere charged with electricity. But predictions on the weather—the one who says the least is the best prophet, because he runs the least risk of making a mistake.

Hancock Co., Ill.

Don't Let Swarms Get Into a Mix-Up.

BY WM. M'EVOY.

LAST season was the worst one ever known in Ontario for many swarms rushing out at the same time, and all clustering in one great cluster. Where this takes place it uses up much of the bee-keeper's time in putting things to rights, and delays all his other work, which needs very prompt attention, and ends the season with many dollars short in his honey crop.

Last summer I saw the swarms coming out of eleven of my colonies at the same time. I called my help and we very promptly covered ten of them with quilts, and sheets, and left the one that had the most bees out go on and alight, which it did; and before they had half clustered four more colonies started swarming, and these were just as promptly stopped by covering them with quilts which went down to the ground, and hung out about a foot from the hives; and under these quilts the bees rushed out of their hives pell-mell for a few minutes, and then returned back into their hives.

As I keep all my queens' wings clipped, and finding the swarm up the tree not returning, I knew that it must have a young queen with it, and at once hived that swarm, and promptly took the quilts off the 14 colonies so as to let in the field-bees that were coming home hunting for their hives. I then went to work, and divided the bees and made a swarm from each of these 14 colonies, which I had prevented from swarming, and secured a good yield of honey. I hit on this method over 25 years ago, and have practiced it every since, and it has been worth many dollars to me.

Ontario, Canada.

Association Notes.

The Foul Brood Bill in Illinois.

Reports from Springfield are very encouraging. Pres. Smith and Sec. Stone, of the Illinois State Bee-Keepers' Association, are on the ground, and go to see some of the lawmakers every week or two. If the bill becomes a law we can thank the few bee-keepers who have personally labored with their representatives in the Legislature.

As we understand the situation now, the Legislature of Illinois will adjourn about May 1, and between now and then we will probably learn our fate. The most serious danger that threatens us is that our bill will be smothered by a multitude of other bills in the rush of the last days of the session. But we have done all we could. The fact that *the two Associations have joined hands* in efforts for the bill, may have enough weight with the Legislature to cause favorable action.

Let me sound a note of warning: Don't any of you break your hearts if we fail. This may be only the opening wedge to break into a success in the next meeting of the Legislature, in 1905. Then we can go at them with an added force from our experience of the present.

I wish to say right here that *less than a dozen* have taken enough interest to *subscribe money in aid of our bill.* Possibly *less than 100, all told*, have written to the members of the Legislature and given any thought to the mattter. And there are 35,000 bee-keepers in Illinois! If we fail, can you guess *why?*

HERMAN F. MOORE,
Chairman Foul Brood Committee,
Chicago-Northwestern Bee-Keepers' Association.

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

The Spring and the Bees.

This has been rather an unusual spring. March 7 we took out some 20 colonies of bees, let them have a good flight, and carried them back into the cellar again. March 13, we took out 20 colonies, and left them out. March 19, the thermometer stood at 75 degrees, and we took all the rest out. Really, the weather was so warm that they might just as well have been taken out two weeks before, although we have had two or three snow-storms since.

One day the thermometer stood at 76, and the bees were having a lovely time bringing in such large loads of pollen, and the next day the ground was covered with snow.

Taking it all in all, I am glad we took them out when we did, although it might have been better to have carried the weaker ones back to the cellar during the storms. The time for bringing the bees out of the cellar, as well as the matter of returning, is rather a troublesome question to decide. Who can tell just what is best?

Our bees wintered finely, and came out in good condition as far as we can judge from outside appearances, considering they were put into the cellar under very adverse circumstances. On account of having a furnace put in we were obliged to leave the bees out until December. They were carried in the 8th and 9th, after the thermometer stood at 8 degrees below zero.

We have not done any overhauling yet, because for a month past everything else has been set aside for the tabernacle meetings, led by Rev. W. A. Sunday, with audiences of 800 to 1200, resulting in more than 200 conversions.

April 2 I picked a dandelion in blossom. Pretty early for Illinois; but everything is early this year.

The Chayote as a Honey-Plant.

Have any of our bee-keepers had experience with the chayote? Not the coyote belonging to the genus canis, whose name is so similar to that of the tropical plant, but the chayote, *Sechium edule*, the vegetable pear.

However, it is on account of the chayote's value as a bee-plant, and not in regard to the edible qualities of its fruit that I am chiefly interested. But as to any personal knowledge concerning this Mexican vegetable, I have that yet to learn, though if all goes well my experience will not be afar off, inasmuch as I have planted the seed early this month, keeping, of course, the buried treasure indoors, until all danger of frost is over, before transplanting.

Although a plant of the tropics, the chayote can be grown in cool latitudes, it is said, therefore I hope it will take kindly to Indiana soil. The instructions state that it requires a somewhat sheltered situation, and something to climb upon; also, that it is the universal practice to plant the entire fruit instead of extracting the seed, and planting it alone.

The United States Department of Agriculture, Division of Botany, published a Bulletin by O. F. Cook, concerning the chayote. It contains a number of plates, and is a beautiful and interesting pamphlet, and, as far as known, this paper is "the first adequate account of the nature, culture, and economic value of this promising member of the squash family."

Regarding its value as a bee-plant, the Bulletin states:

"As in other vegetables of the squash family, the stamens and pistils are in separate flowers, pollination taking place through the agency of insects. To attract these the flowers of both kinds, but especially the pistillate, yield abundant nectar, which is secreted in ten glands, two at the base of each of the lobes of the corolla. In most of the countries into which it has been introduced bee-keeping has not been a regular industry, and the value of the chayote as a source of honey has not been noticed, but the reports of experimenters in New South Wales contain very emphatic statements on the subject:

"'When the plant is in flower I have noticed that the vines were swarming with bees, and as flowers are scarce in the autumn the plant will no doubt be valuable as a honey-producer:'

"It has long been known that the flowers of this family are rich in honey, but from the standpoint of the bee-keeper they have been considered of little importance because seldom accessible in sufficient amount, though in the United States fields are recognized as good bee-pastures. The chayote seems to make up by numbers what the flowers lack in size, so that the yield of honey may be larger than in related plants. In addition to this there is the fact that Sechium is a perennial bloomer in the tropics, and in the subtropical regions has a very long season."

Wayne Co., Ind. KATE V. AUSTIN.

✻ The Afterthought. ✻

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, O.

SELLING LIGHT-WEIGHT CASES AND SECTIONS OF HONEY.

The Chicago Convention seemed to have quite a discussion about the honesty of selling light-weight sections and cases. All right. Let there be more such discussions. In the long run daylight is apt to have a wholesome effect upon naughty deeds. Here's a chunk of wisdom to help things along: Some practices are essentially and incurably wrong. Some practices not necessarily dishonest are objectionable because they lend themselves to dishonesty so easily. The good man may yield to the latter because he has to; but at the former kind the good man stops off. If he is found doing them his title of "good man" gets a bad dent in it. The paternal desire to make other people be honest as well as ourselves is good within certain bounds, but has been known to be carried too far. Page 164.

KINKS IN FORMING NUCLEI.

Two good items not universally known on forming nuclei: Make them toward the close of several days of bad weather, and the bees will not go home nearly so badly. Mixed bees from several colonies do not go home so badly as is the case when the bees are all from one colony. The last item is something of a curiosity, and is worthy of study to find out why. Doolittle, page 165.

A POETICAL MIX-UP ABOUT HIVES.

When Mr. Aikin gets into the thick of the fight defending his new hive he slumps into poetry and says—

"Mr. Doolittle kicks
About a few sticks."

Yes, and there's the Styx, across which our bees might be landed by a few ill-fated kicks—the pranks of new inventors—"if we don't watch out." I fear Mr. Aikin, in his defense, ignored the weakest point—brood-nest pushed across the sticks only a few days ago, and lo, here comes a long, cold storm with winds. I rather fear the brood-nest will recross the sticks, and the exposed young brood below cross the Styx. Page 166. (Please don't allow yourself to lose that concluding rhyme.)

KINGS NOT ENCOURAGED IN THIS "LOCALITY."

Name of the king of Finland wanted, eh? And Dr. Miller hadn't even the grace to say, "I don't know." Knew all about the king of Finland, of course, but couldn't let a child in the apicultural kindergarten be wandering from the subject so. Page 168.

FORMALIN VAPOR FOR FOUL BROOD.

It's not a thing to rush into in a headlong manner, but up to date the power of formalin vapor to extinguish all germs of foul-brood seems one of the most promising new things. Promises to be better than destruction of the combs at any time, and immensely better on the numerous occasions when bees are disinclined to build on account of poor honey-flow. Page 180.

FEEDING SOUR HONEY TO BEES.

As to the problem of working over soured honey, it seems to be granted by all that it may be fed in warm weather as a supply for hungry brood. Possible, of course, but may we not have been too hasty in assuming that it was profitable? If a man should stand up and call that a very unprofitable thing to do, how could we refute him? When damaged honey is fed to bees with the idea of making them renovate it and store it as surplus, I *think* this is the way they proceed:

They take it into their stomachs, fly around with it, eject the greater portion as urine, and finally store the lesser portion as sound, or nearly sound honey. (Reason why so few find "feeding back" profitable.) Now is it not probable that they do this same thing in breeding-time before any of it actually gets to the brood? And may they not wear themselves out in the process more than the amount of food saved will pay for? Put it, if you please, at the rate of ten old bees worn out for nine young ones reared. Bees in mid spring are precious things, and we want to figure close on them.

When we heat damaged honey some of the badness is evaporated out, or foamed out; but the acids stay in—and so I fear do most of those things of mean taste which the chemist has not got around to name yet. Good honey has a remarkable power to *disguise* bad flavors. So this is what takes place—I guess—in the cooking down; we get rid of the alcohols and mucilages and part of the water. Then the thickened honey—that part of it not damaged—disguises to some extent the other bad things. Not very satisfactory.

Honey and virture and beautiful snow
Better not soil in the first place, you know.

Page 181.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

Questions by a Beginner.

1. How can I put a swarm of bees into a hive with all those frames in it? If I would move the frames over while dumping the bees in, they would come out before I could put the frames back and cover the hive. My hives are chaff hives.

2. How does the queen-cell look when the bees are going to swarm? Does it look any different from the other cells at any time?

3. Will the scent of sulphur hurt the bees? Will they stay in the hive?

4. Where is the queen when the bees cluster in a bunch on a limb? Where does the queen stay in a hive?

5. How can I tell when other bees are robbing mine? How can I stop them?

6. Where do I clip the queen's wings? Will a pair of sharp shears do it?

7. When is the best time to put on sections, before the bees swarm, or when they first start out in the spring?

PENNSYLVANIA.

ANSWERS.—1. If a swarm is gently dumped right on top of the frames the bees will go down of themselves without moving the frames. But it may be better to put the swarm at the entrance of the hive and let them run in.

2. A sealed queen-cell looks like a peanut at all times.

3. It will do no harm.

4. The queen may be anywhere in the bunch on the limb, and in a hive generally on or near the brood.

5. Catch a bee as it is leaving the hive, crack it open, and if it has honey in its sac it's a robber belonging to you or some one else. One way to stop robbing, if you can stop it at all, is to pile a lot of hay or straw at the entrance and sides clear to the top of the hive, and keep it thoroughly wet.

6. Yes, almost any scissors will do—sheep-shears would be too large—and you may cut off half or more of the wings on one side.

7. Put on sections when the chief honey-flow begins—in your region about as soon as you see white clover in bloom.

◆ ◆ ◆

How to Detect Foul Brood.

I have been reading the American Bee Journal for about three months carefully, and Prof. Cook's book, and have been noticing particularly what is said about foul brood. I have 9 colonies of bees; I bought 4 colonies in the winter, and have been suspicious of one colony for some time, for fear they have foul brood, on account of the different odor in the hives. They fly out and work as strong as almost any of the rest. What is the best way to know whether they have foul brood or not? How long will a colony live after it gets foul brood? and how long will it take others to become infected, sitting side by side of them. What shall I do with them if they have it? Please explain as plainly as possible, as I am beginner.

MISSOURI.

ANSWER.—This letter illustrates what was said in this journal editorially not very long ago, when it was urged that every one should study up carefully in advance the subject of foul brood. You will find in your text-book answers to most of your questions more full than it is possible to give in this department.

Look on page 475 in Cook's "Bee-Keeper's Guide," and after reading the instruction there about the holes in the cappings and the springing back of the rotten larvæ you can make a pretty safe guess as to whether you have foul brood or not; whereas I can't tell a thing about it from the information you have given.

A colony may live a few months or several years after it has foul brood, and it will take the other colonies as long to contract the disease as it will take them to get the least drop of honey from the diseased colony. You will do well to send 25 cents to the office of the American Bee Journal to get a special pamphlet on foul brood.

Varieties of Bees—Feeding.

1. It would be of interest to see in the American Bee Journal what an Italian bee is, where the Carniolians, Goldens, Moore's and Holy Lands first originated, and what the different natures of each strain of bees are.

2. To stimulate early brood-rearing, is it necessary to feed every day, or would one good feeding a week be sufficient, where feeding on the bottom-board inside of the hive?

IOWA.

ANSWERS.—1. Yes, a few of the readers of these pages would be interested to read all about the different races of bees, but thousands of them would say, "We don't want space taken up with that, for we all have it in our text-books." This department is only supplementary to the text-books, and not intended to take their place.

2. If flowers are not yielding and weather is warm, the natural harvest will be more nearly imitated by a little every day, or every other day, than by one feed a week.

Feeding Sugar Tainted with Kerosine.

I put 25 colonies in my cellar last fall, which came out all right. I have 100 pounds of sugar that I would like to feed them, but it has had kerosine-oil spilled on it. What can I do with it?

MASSACHUSETTS.

ANSWER.—A very little oil will likely do no harm. If much, mix some sugar with water, half and half, let settle and skim off the oil; if still too strong for the bees to take, I don't know of any remedy.

Queenless Bees—Wiring Foundation.

1. I have 2 colonies of bees that are queenless. If I should give them a frame of brood and eggs from another colony would they rear themselves a queen?

2. Last year I used full sheetes of foundation in brood-frames, and had a good deal of trouble with the foundation breaking down when the bees got on it. I had it wired crosswise of the frames, too. It seems to buckle above the wires. What would be the objection to wiring the frames up and down, then the foundation would not buckle, would it?

KANSAS.

ANSWERS.—1. Yes, but it is not likely that the queen would be the very best, and probably you will do better to unite with one of your weaker colonies that has a good queen.

2. I wonder if you had the foundation fastened to the top-bar. Yes, I have had hundreds of frames wired vertically, and no buckling, although nowadays horizontal wiring is generally preferred. For my own use I prefer vertical splints.

Transferring—Beginner's Questions.

1. I bought 7 colonies of bees late last summer, and they were in bad condition. The hives are old and rotten, and the comb is old and black. The first warm days this spring they came out and all seemed to be at work, but later all but one colony seemed to be sluggish and lazy. Would it be best to put two colonies in one hive?

2. Would I better transfer them to new hives? If so, when is the best time? and when shall I proceed?

3. Will they always work when they have a queen? and will they ever work when they have none? Some of my colonies are not at work yet; when I open the hive there seems to be lots of bees.

4. I notice in the Journal reference is made to a text-book. Where can I get one? I know I am green, but I will learn.

5. My bees are alive with ants, and they also have moths. What would you advise?

TENNESSEE.

ANSWERS.—1. As you say later on that there are plenty of bees in the hives, it is hardly advisable to unite. Possibly there is nothing for them to do—no flowers to be had.

2. It would be better to have new hives than rotten ones, but old, black combs are as good as new ones. If the hives are frame hives, and the frames are of the right kind, merely lift the frames into the new hive. Otherwise transfer as directed in your text-book. You can transfer in fruit-bloom; or perhaps it will be better to wait till the colony swarms, hive the swarm in a new hive, and 21 days later break up the old hive.

3. When there is nothing for them to work on they may lie idle; if pasturage is plenty they will work, queen or no queen, but a queenless colony seems little inclined to hustle like the others.

4. Now you're a man after my own heart to ask a question like that. Between you and me, I feel badly many a time when some beginner asks me a question and I'd like to tell him all about it, but it something that's explained more fully in the text-books than it can possibly be done in this limited department, and if I should answer it here some new subscriber would want the same question answered inside of three months, and I'd have to keep answering over and over questions that none of the other readers would care anything about. So I'm glad you're after a text-book. There are several of them, and you can get one from any publisher of a bee-paper or from any supply dealer. Perhaps it would be just as convenient for you to get one from George W. York & Co., 144 E. Erie St., Chicago, Ill., publishers of this journal. I'll ask the editor to tell more particularly either here or elsewhere, about the text-books and their prices. But let me caution you about one thing: He publishes the book "Forty Years Among the Bees," and you may think from what he says that you ought to buy that. Don't you do it. At least not for your first book. One of the others will be better, and then it will be all right for you to get "Forty Years" as a second book. [See the book list on page 239.—EDITOR.

5. Strong colonies will clean them out, and Italians are much better than blacks.

Painting Hives with Bees in Them.

Would the odor of fresh paint affect or anger the bees if I painted the hives while the bees are in them?

IOWA.

ANSWER.—No, unless you jar the hives. A few bees might stick to the paint.

Questions on Queen-Rearing.

As I wish to rear one hundred or more queens this season for myself, and as I see there is a difference in thoughts presented by such men as G. M. Doolittle, E. Gallup, Henry Alley and others, I feel that a few question will be appreciated by those who are interested in the subject of rearing queens for themselves—queens that will be the best that it is possible to rear, not having any "missing link" whatever in any line.

1. If the only way to rear extra-good queens is by natural swarming, and by natural superseding, then has not man reached a limit beyond which no further progress is possible?

2. Almost all seem to agree that there are three things necessary in order to rear long-lived, prolific queens whose workers are sturdy and long-lived. These three things seem to be, plenty of animal heat or magnetism: plenty of royal jelly; and to be started out and kept laying continuously and to the full capacity during the first season. It is a well known fact that swarms usually issue on the sealing of the first queen-cell, thus taking away one-half or more of the bees in the hive, and would not the queen hatched out, in case the weather became cool, be lacking the proper amount of heat required to produce a good queen? And especially so if the cells were on the end of the frame, or at the bottom, as they usually are?

3. Does any one know that the royal jelly is any different when supplied at natural swarming time, and that supplied at other times?

4. Does the queen lay a different egg at natural-swarming time than she does at any other time?

5. Does any one *know* that the egg she lays in an embryo queen-cell is any different from any other worker-egg?

6. Is the umbilical cord attached to the cell during the whole life of the larva, or is it thrown out after the larva has partly developed? Has any one ever found such a cord for the first three days after hatching?

7. Is there not considerable in keeping the queen laying to her full capacity during the first of her laying season? Is that not one of the reasons why so many are not prolific when kept in a nucleus for some time after commencing to lay?

WISCONSIN.

ANSWERS.—1. I don't know just what chance there is for further progress, but I believe, with a good many others, that just as good queens can be reared outside of natural swarming and superseding.

2. I suppose all are agreed as to the need of plenty of heat and food, but I think many believe it necessary to have a queen laying continuously to her full capacity the first season. Usually the weather is so hot at swarming-time that there is little trouble about heat, but some time a cool time may come. Sometimes you will find a dead larva or pupa in one of the lowest cells, but there are always enough cells in the warm parts of the hive.

3. I think it is known to be the same.

4. No.

5. I think it is known to be the same.

6. I don't believe there is any umbilical cord either before, on or after the first three days.

7. I don't know, but I doubt the importance of it.

Queenie Jeanette is the title of a pretty song in sheet music size, written by J. C. Wallenmeyer, a musical bee-keeper. The regular price is 40 cents, but to close out the copies we have left, we will mail them at 20 cents each, as long as they last.

What Yon Yonson Thinks

Vel, my goodeness, ay feel kine of sorry for Peter Peterson, coz be is struck wid prosperity plenty bad. Mebby it's cause he got too much confidence. He bean vork for Ole Peterson for 40 days, an he git 40 dollar, an be haven plenty mony, an now he tank he iss yust som smart somnobody, an he yust lurn to talk merican like nutting. It coms yust so natural for Peter to lurn merican som to ete cabbage. My goodeness, Peter say ven he only been in Unity State for tree mouts he could talk merican in tree different langvige, and he tank he iss a dandy feller. He say to Ole Peterson, he don't goan to milk his cows any more, so if Ole vont dom cows milkt he can yust do it self. Vel, Ole he don't lak das, so he say, "My goodeness, Peter," he say, "ef you don't goan to do da vork, den ay goan to turn you off." But Peter he don't care; he say if Ole Peterson turn him off den he goan to quvit. An he don't goan to vork for him any more. Dat's vot Peter sed.

An he say he vont for Yon Yonson to lurn him how to keep bees. Vel, Peter iss som purty smart feller, so mebby ay hire Peter to help drive da bees das summer. Peter vil be youst da feller for brush-svarming, only ay iss kine of frade dat mebby eider da bees or Peter is liable to abscond; but if ay can keep Peter an' da bees togedder long nuff den if Peter don't ketch on, mebby da bees ketch on to Peter. An Peter is good for bout 500 revolutions per minit, in case oxident.

Peter he say he vont to keep von svarm on share, an he goant to sho me how to git lots of hunny. "Vel," ay say, "if you promis not to hide behine da potatis box agin, den you can have von svarm on share. Ay got von colony of kine of black bees, dom is kine of kross, so mebby you git more dan your share; but ay vill give dom new quveen so dom soon vil bee all clover bees," ay say, "an' dom vill all have long tungs."

Vel, Peter say he don't kare vot kine of tungs dom got, or if dom is tung-tied, or even got glas eyes, but he don't vont dom shal hav any longer stings dan iss absolutely nessessary.

Now, Peter, he don't vas married yet, but he got awful nice girl vat live along da telephone line. Ay tel Peter if he don't votch out he soon goan to be ole batch, an dom say ole batcblers don't live so long som married mans. Vel, Peter he say he don't believe da married mans live any longer, but mebby it seems lots longer, he say, cause dom have more trubble.

But Peter he tank it is fun to call up his girl on da telephone an kine of mak love. New, it iss gainst da rules to du any sparken on da telephone, cause you know da souns kine of silly; but ven da boys along da line listen to Peter, dom has more fun don Peter, so ve don't vas enforce da rules on Peter yet.

Now, Peter's girl, Christina, she live on different line, so he hav to call up Central. Vel, da boys along da line dom kine of put up job on Peter, an ven Peter call up Central an say, "Give me Christena, please," den Central girl she ring up da hotel to da nigger cook, so purty soon she say, "Hello, sah!" "Hello, Christena!" Peter say, "How is you feeling das evening?" "Oh, fine, fine," she say. "Is yo Sambo?" she say. "No, it don't vas any rainbow in vinter," Peter say, "but mebby ve goan to hav som more snow," he say, "an mebby ay goan to com roun tomorrow nite an' tak you slay ride, an ve go to church," he say.

"Bles yo dea' hart!" she say. "Yo is de bestes nigger in town." "My goodeness," Peter say, "ay don't vas any nager. Seems to me your voice don't vas soun natural," Peter say; "you musta hav bad cole, ay hope you don't vas sick."

"Hoo is yo?" she say. "Is you Sammy?" "No, ay don't vas Santa," Peter say. "It don't vas time to hang up yours stocken now," he say. "Santa Claus is vay up in Alaska now," Peter say. "Do ay talk lak Santa Claus?" he say. "Santa don't vas got his phone connected yet," Peter say. "but ven

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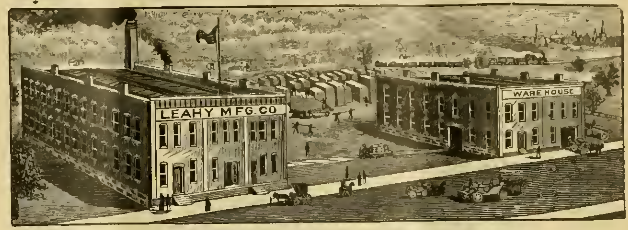

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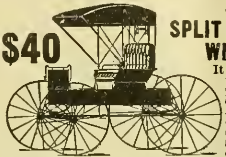

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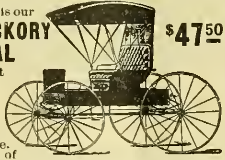

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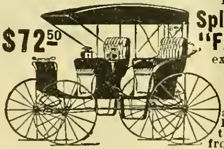

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Muth's Special the Best

A complete line of LEWIS' MATCHLESS SUPPLIES at their factory prices.

Regulation dovetail with ⅞ Warp-Proof Cover and Bottom. Costs more, but sold at same price as regular.

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HONEY AND BEE-KEEPERS' SUPPLIES,
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he get ketched up vid da times mebby he vil conect, den ay tank he goan to have plenty to do."

Den sombody begin to laff, an von boy he ask Peter if he kno dat he vas talken to da nigger cook in town. An' den Peter begin to ketch on, an he ring off. An' now Peter don't bodder Central to ring up hiss girl any more, an' he say be tank da telephone is plenty good ting, but it don't vas perfect yet.

YON YONSON.

FROM MANY FIELDS

Bees Wintered Well.

The bees have wintered well. I have four yards. The season is much farther advanced than usual. White clover appears to be in abundance, and dandelions are opening, but the cool winds prevent bees from working; in fact, I think we are losing quite a few bees from their eagerness to work. They fly out when too cool, and become chilled before they can return to the hive. H. G. QUIRIN.

Lucas Co., Ohio, April 9.

Prospects Good.

Bees are in the best shape this spring that I ever had them at this time of the year. I have some booming stock to breed from. Prospects are good for a good year. D. J. BLOCHER.

Stephenson Co., Ill., April 13.

Results of the Season of 1902.

My last year's report is, (spring of 1902), 45 colonies, increased to 59 by division the latter part of August, and got 250 pounds of comb honey and 3300 pounds of extracted. I sold the most of it at home for 15 cents per pound for the comb and 9 cents per pound for the extracted. I lost 2 colonies in cellar-wintering, and the remaining 57 colonies are in good condition. I took them out of the cellar March 17, and March 18 they carried in natural pollen; but, besides, I used about 60 pounds of rye-flour which they carried in.

The outlook for the coming honey crop is fair, on account of almost all the fields that are not plowed being covered with white clover. I had no natural swarms last year.

Dodge Co., Wis., April 14. WM. SEITZ.

Bees Starving.

Bees are starving all over this part of the country. Many will spring dwindle because of no breeding last fall. I don't know my loss yet, but it will not be more than usual.

JOHN C. STEWART.

Nodaway Co., Mo., April 14.

Experience with Bees.

I have received the American Bee Journal regularly since I subscribed for it, and I am well pleased with it, as well as with the book which contains so much bee-information.

I commenced keeping bees about five years ago, and in 1901 I, with most other bee-keepers, met with almost an entire loss, the bees seeming to have had the dysentery; they died leaving plenty of honey, which would have wintered them. When we came to examine the honey we found it strong and watery, unfit for use in any way.

In 1902 I bought 5 colonies with which to start a new apiary. In November I placed them in the cellar for the winter, all well provided with winter stores, and wintered very nicely.

The first part of last season (1902) being a wet one the bees scarcely made enough to keep them, but cast some strong swarms. The season closed with a good flow of beautiful honey. One large swarm was hived June 26, which filled the lower chamber and 48 one-pound sections of surplus. I sell all my comb honey at 18 to 20 cents per pound.

I have Italian bees, and use the Langstroth hives almost entirely. They were well provided for the long, cold winter, and have thus far done nicely, and all are in a healthy condition. In November I packed the bees in a shed well banked and darkened; heretofore I have wintered them in the cellar with nearly as good results, only I find my cellar too damp at times, causing some colonies to sweat and mold.

Although my apiary is not very large there is much room for it to grow. There are not many bees kept near where mine are, the nearest apiary consisting of about 50 colonies, being three miles southwest of here.

I think I will let my bees take a flight next week if the weather is suitable.

I consider it a great pleasure to take care of my bees. I study every article pertaining to bee-culture; still we must work and experiment with them ourselves, as there is nothing in any line of business like real experience. There is a great deal in keeping an apiary neat and clean, keeping the hives well painted and well arranged in some clean, shady place. OREN S. REED.

Fayette Co., Iowa, March 21.

Two Years of Failure—Outlook Good.

The last two years were failures here, but the outlook is good for this season. There is lots of white clover. The weather is cool and rainy. Plums are in bloom. W. D. HURT.

Cass Co., Mo., April 9.

Quite a Loss in Wintering.

There is quite a loss in bees here this winter. We had any amount of honey-dew last fall, and a severely cold winter. I think these were the cause of the loss. Prospects are fair for a good honey crop the coming season.

G. W. VANGUNDY.

Uinta Co., Utah, March 23.

Hand Crushed and Stung.

While moving part of my bees to an outyard I got my hand smashed, and at least 100 stings about my head and face. A defective bridge was the cause of the trouble. My hand is very painful, but no bad results from the stings.

Bees are booming to-day, the weather is fine, and prospects flattering.

Ellis Co., Tex., March 8. LON ROSSON.

Bees Coming Out Fine.

Bees are coming out fine this spring, and the indications are that they will find plenty of nectar this season. The first pollen came in on St. Patrick's Day—March 17.

F. KINGSLEY.

Thayer Co., Nebr., March 31.

Unfinished Sections.

In reply to Mr. Bevins, on page 235, I would say that I did not intend that method for fall feeding, as I scarcely ever feed in the fall; I prefer doubling for strength, and also using the best-filled combs to fill up with.

Now I am nearing the 72 mark in age, and have owned and handled bees since I was 18 years old, and believe the bees I own now are similar in character to all others, and I could never get them to carry down honey as you, Mr. Bevins, recommend. It has been my experience that however strong they were in the fall some of them come out both short in stores and weak in numbers. These are the ones that need close attention, and the ones I feed with my unfinished sections, and it is the only method I have ever found successful. You say that you want the bees to have access to the honey in the sections at all times. If you do, why do you place anything between them? Why not set your super on as usual? With me the cloth did not work at all, but with the board I have no trouble.

As to the use of the firmer chisel I think it by far the handiest tool in the business. No matter if it does mangle, you will have new drawings which will surely be white and new.

Doubtless you will smile again on reading this, for no doubt you are one of these old, worthy veterans, and think there is no way like your own. That is all right—I am bordering heavily on that line.

You will plainly see the reason why I speak of the circulation through the hive if feeding in the spring, as the weather is not to be depended upon at all times in regard to heat and cold. Some have said honey in unfinished sections would candy. I have never had any trouble that way, and even if I did I would scrape off down to the septum, and that would relieve the matter.

Now, Mr. Bevins, we will have no quarrel, but if I were near you I would refer you to 2d Epistle of John, 1st chapter, 12th verse.

A. Y. BALDWIN.

Dekalb Co., Ill., April 13.

Wintered All Right.

My bees have wintered all right, and have clustered out on the hives some.

I look for a good yield of honey. My bees swarm very little. I have not had a natural swarm for four years. I have kept bees for 40 years, and think I have learned something about bee-keeping, but I do not know it all yet. I have no increase in colonies.

HENRY BEST.

Carroll Co., Ohio, April 9.

Using Veils—Bees in Germany.

Over seven years ago I started to keep bees, and at that time looked upon myself as an expert bee-keeper, but I found out that I had more to learn than I could possibly crowd into my head in one year. It is past seven years, and I do not know it all yet.

One thing I found out, and that is, that I could hardly follow J. M. Young's remarks about bee-veils, on page 215. I am for a bee-veil, and a good one at that. I am not a particle afraid of bees, but I don't care a bit what some one else thinks when they see me go to work with them with my face protected with a good veil. Please remember I had some experience in the line of walking among the hives without face protection. I had a three months' trial getting one of my eyes cured which was affected with the sting of a bee.

On page 216 I read something about bee-keeping in Germany; as Mr. Hasty expected, locality had something to say. It is a matter of fact that in the southern part of Germany they use houses, with few exceptions, for their bees; in the northern States they use the straw hive; and in later years the improved hives, and change places with the bees according to the flowers in the different localities.

Now, Mr. York, I can not help getting a

Italian Queens, by Mail.
Golden and Honey Queens before July 1

	1	6	12
Untested	$1.00	$ 5.00	$ 9.00
Tested	1.25	7.00	13.00
Breeder	4 00		
2-frame Nucleus (no queen)	2.00	11.00	21.00

Add price of any Queen wanted with Nucleus.
Our bees are shipped in light shipping-cases. Purchaser pays express on Nuclei.
Safe arrival guaranteed of all stock sent out.

BATAVIA, ILL., Aug. 21, 1901.
Dear Sir:—I thought I would let you know as to results of the nucleus sent me. They were placed in 10-frame hives and now they are in fine condition. From one I removed 24 pounds of honey and had to give 6 of them more room, as they were hanging out. They have more than reached my expectations.
Yours respectfully, E. K. MEREDITH.

DAVENPORT, IOWA, Dec. 31, 1901.
Your queens are fully up to standard. The honey queen that you sent my brother takes the lead. She had a rousing colony when put up for winter. The goldens can be handled without smoke or veil. Very truly yours,
JOHN THOEMING.

Notice.—No tested stock sent out before May 15. Send money by P. O. Money Order or Express Order. D. J. BLOCHER,
17Atf PEARL CITY, ILL.
Please mention Bee Journal when writing

BOYS WE WANT WORKERS
Boys, Girls, old and young alike, make money working for us. We furnish capital to start you in business. Send us 10c stamps or silver for full instructions and a line of samples to work with. DRAPER PUBLISHING CO., Chicago, Ill.

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$27,50 is all that you have to pay for one of our full-rigged Top Buggies. Oil tempered springs; fine finish; worth double the price. We make harness too. Write for Catalog and liberal agency plan.
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HIGH CARBON COILED SPRING STEEL WIRE FENCE
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INDIANA STEEL & WIRE CO.
BOX 529, MUNCIE, INDIANA.
5Dtf Please mention the Bee Journal.

Having had 5 years' experience in Rearing Queens
and having a breeding queen that is two years old, whose bees are so gentle they can be handled most of the time without smoke, besides being the greatest honey-gatherers I ever saw, I have decided to offer her daughters during the season of 1903 at the following prices. Terms cash:
Reared by Doolittle Method.
Untested Queen, 75c; 6 for ...$4.00
Tested Queen, $1.00; 6 for ... 5.00
Natural Swarming and Supersedure.
Untested Queen, $1.25; 6 for ... 6.00
Tested Queen, $1.75; 6 for ... 9.00
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is the short line to the East, and the service equal to the best. You will save time and money by traveling over this line. It has three through daily express trains, with through vestibuled sleeping-cars, and American Club Meals, ranging in price from 35c. to $1.00, are served in Nickel Plate dining-cars; also a la carte service. Try a trip over the Nickel Plate Road, and you will find the service equal to any between Chicago and the East.
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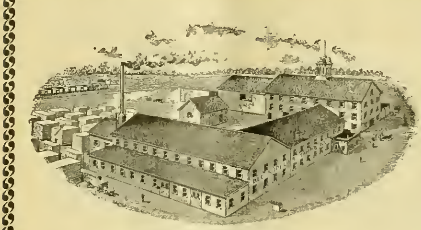
Italian Bees and Queens
Choice Tested Queens from the finest Red Clover Stock in the U. S. In order to introduce this SUPERIOR stock I am going to offer a limited number of 2-frame Nuclei with a fine Tested Queen for $2.00 each; Queen alone, $1.00; Selected Tested, $1.50 each; Breeders, $3.00 each: Untested, from same stock, 75 cts. each, or $6.50 per doz. Discounts on 50 and 100 at a time. My Queens are bred by the best known methods, and I challenge the world to produce finer Queens or stock. Safe arrival and reasonable satisfaction. Address,
W. J. FOREHAND, Ft. Deposit, Ala.
16A2t Please mention the Bee Journal.



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The Danz. Hive—
The Comb Honey Hive.

We sell it. We are authorized jobbing agents for THE A. I. ROOT CO., for Michigan. Send us a list of the goods you want for this season, and let us quote you prices. Beeswax wanted. Send for catalog. H. M. HUNT & SON,
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Tennessee Queens.

Daughters of Select Imported Italian, Select long-tongued (Moore's), and Select, Straight 5-band Queens. Bred 3¼ miles apart, and mated to select drones. No bees owned within 2½ miles; none impure within 3, and but few within 5 miles. No disease. 30 years' experience. WARRANTED QUEENS, 75 cents each; TESTED, $1.50 each. Discount on large orders.
Contracts with dealers a specialty. Discount after July 1st

Send for circular.
JOHN M. DAVIS,
9A26t SPRING HILL, TENN.
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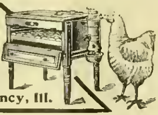

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Perfect in construction and action. Hatches every fertile egg. Write for catalog to-day.
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that the freight rates from Toledo are the lowest of any city in the U.S. We sell
Root's Supplies at their Factory Prices * * * * *
Poultry Supplies and Hardware Implements a specialty. Send for our free Illustrated Catalog. Honey and Beeswax wanted.
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25 years the best. Send for Circular.
25Atf T. F. BINGHAM, Farwell, Mich.

65 Best Queen of Sixty-five 65
MR. ALLEY: BELLE PLAINE, MINN.
I have a queen received from you in 1900. Her bees are the best honey-gatherers of an apiary of 65 colonies in which are queens from different breeders—natural queens, as Dr. Gallup calls them. The Adel queen is the best of the lot.
C. J. OLDENBERG.
Price-List now ready. H. ALLEY,
16A4t Wenham, Mass.

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beats our prices on the same quality of fence, because they never make our quality.
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Barred Plymouth Rock Poultry, Strawberry Plants, Bee-Fixtures. Send for circular.
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SHEEP MONEY IS GOOD MONEY and easy to make if you work for us. We will start you in business and furnish the capital. Work light and easy. Send 10 cents for full line of samples and particulars.
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over the Nickel Plate Road and be convinced of its superior train service. Solid through daily express trains between Chicago, Ft. Wayne, Findlay, Fostoria, Erie, Buffalo, New York City and Boston. American Club Meals, ranging in price from 35c. to $1.00, served in Nickel Plate dining-cars; also service a la carte. Rates always the lowest. No excess fare charged on any train on the Nickel Plate Road. Chicago depot: Harrison St. and Fifth Ave. City Ticket Offices 111 Adams St. and Auditorium Annex. John Y. Calahan, General Agent, 113 Adams St., Room 298, Chicago. 'Phone Central 2057. 2—17A5t

Wanted to Buy
unlimited quantities of ABSOLUTELY PURE BEESWAX. Must be nice. Best prices paid, either cash or in Supplies. Address at once,
C. M. SCOTT & CO.,
1004 E. Washington St., INDIANAPOLIS, IND.
15Atf Please mention the Bee Journal.

100 Mounted Queen-Cells and one sample of the Stanley Cell-Protector or Introducing Cage for 70 cents, postpaid.
16Atf ARTHUR STANLEY, DIXON, ILL.

little "poke" in at you and your "York's Honey." I had, last season, an average of 85 pounds of No. 1 comb honey, sold it at 12½ and 15 cents a pound, and every section had my name stamped on it. Please do not get mad, but I would not have left it off even if I had to take the honey back, if I sold it to you.

I have 18 colonies of bees in fine shape on the summer stands. The weather is warm, and the bees are busy carrying in pollen and building up for the expected clover honey-flow.

I hope every bee-keeper in this land will find himself well paid, at the end of this coming season, for all his trouble and stings.

Lewis Co., Mo., April 4. JOS. KELLER.

How Far Bees Go for Honey.

Allow me, for the many bits of information I derive from the American Bee Journal, to give in return my little item of knowledge.

One writer says he has noticed that bees do not go more than a mile from the hive for honey. I am in a position to be quite sure of what I say—I am the only one with bees in this section of British Columbia. A man 13 miles away got some bees last year; previous to that time there were no bees within 40 miles of me. Before the 13-mile neighbor got his bees mine were the only ones in the country, and they were seen on gooseberries in a garden 3 miles away, or more than 2 miles as the crow flies, or rather, as the bee flies. They were also seen in another direction about 3 miles away, as the bee flies. In each case, also, they had to fly over primeval bush to get to these gardens; so I am sure they go more than a mile, or even 2 miles in search of honey.

My 5 colonies appear to be in good shape, but as soon as I have peeped into the hives I will write more fully. H. BEER.

Brithish Columbia, March 30.

Good Prospects for Clover.

I got my last 8 colonies out yesterday, and they all seem to be in good condition. I lost one colony out of 219, and that was queenless; all the rest are alive at this time.

We have the best prospects for white clover in 10 years. N. STAININGER.

Cedar Co., Iowa, April 9.

Some Wintered Well, Others with Loss.

My bees came out of winter quarters very strong—I have never seen them as strong in the spring during the long time I have kept bees. I hope for a good year. Lots of bees around here starved during the winter, and more will follow this spring. Those that were cared for in the fall and had been fed are in good shape. HERMAN LUEDLOFF.

Carver Co., Minn., April 7.

Results of Wintering.

EDITOR YORK:—I must admit that you editors are generally a blessing, nevertheless you are at times a bother, which the following will show:

In the January number of the Rocky Mountain Bee Journal, Editor Morehouse called me a terrible name, and tells how many colonies of bees I am to commence the honey season with in 1903; and all this without my knowledge or consent, else I should have insisted on his leaving out the estimate as to how many colonies I would have in the spring. And now *you* tell the public that it's assuming a great deal on the part of Mr. Gill to tell how many he will have left in the spring, and this without giving me any chance to explain. Well, as Yon Yonson would say, "You both bean awful nice fellers," so I am going to let you off this time.

To help Mr. Morehouse out a little in his predictions I will say that I have been quite fortunate in wintering 800 of the best colonies, the loss having been only 5 percent. But of 400 that were in poor condition last fall the loss was about 30 percent. Bees that were in prime condition have wintered as well as usual the past severe winter. But as there was a greater percent of bees in poor condition last fall than usual, I think, on the whole, that the loss has been greater than for a number of years in Colorado.

The outlook for what we have is certainly very favorable, and now if we are faithful unto a few things we may be made ruler over many. M. A. GILL.

Boulder Co., Colo., March 30.

CONVENTION NOTICES.

Illinois.—The spring meeting of the eastern part of the Northern Illinois Bee-Keepers' Association will be held at the residence of James Taylor, in Harlem, Winnebago Co., Ill., on Tuesday, May 19, 1903. All interested in bees are cordially invited to attend.

B. KENNEDY, *Sec.*

Minnesota.—The Fillmore County Bee-Keepers' Association will hold its spring meeting in Preston, beginning the evening of April 29, and continuing over the 30th. Mr. N. E. France, General Manager of the National, will attend the meeting, exhibit the workings of a German wax-press, and make the meeting generally interesting in answering questions and giving instructions in up-to-date apiculture. Mr. France will also speak on the following subjects: "The Busy Bee;" "Foul Brood and How to Cure It; Illustrated by Samples and Charts; "Marketing Our Next Honey Crop;" "Buying Supplies in Car-Load Lots Next Year;" "Benefits of the National Association to Its Members;" and "The Benefits of a Honey Exchange." C. D. Hitchcock will speak on "Finishing Up Comb Honey;" E. A. Crowell, on "The Value of Good Queens Over Poor Ones, and How to Get Them;" "The Value of Text-Books and Bee-Papers;" and "Marketing Our Next Honey Crop," by members of the Association.

The Question-Box will be a prominent feature of the meetings. Questions will always be in order, and will be freely answered.

Kindly tell your friends and neighbors who have bees, of time and place of this convention and the treat that awaits them, and urge them to come. P. B. RAMER, *Sec.*

Standard Italian Queens
OF THE HIGHEST GRADE.

Bred in Separate yards from superior stock of Golden and Leather-colored Strains. Selected from among the best stock of Long Tongue Clover and Honey-Queens in America. Bred by us with the greatest care for business. No disease among our bees. Our elevated country, with its pure mountain air and pure sparkling spring water furnishes the ideal place of health for bees and man. See our circular for the rest.

Queens sent out last season by us arrived in the very best shape, except a few got chilled late in the season in the North. Our Queens have gone to California, Oregon, Canada, Colorado, Cuba, New Mexico, and many of the States. We rear all queens sent out by us from the egg or just-hatched larva; in full colonies. Our method is up-to-date. If you want to know what we have, and what we can do, in the way of fine, large, prolific **QUEENS**, ond how quick we can send them, just give us a trial order.

Prices: Untested Queens, $1.00; 6 for $5.00; 12 for $9.00.

Tested, $2.00; Select, $3.00; Best, $5.00.

Full Colonies, with Tested Queen, $6 00.

3-frame Nuclei, wired Hoffman frames, no Queen, $2.00; 2-frame, no Queen, $1.50. (Add price of Queen wanted to price of Nuclei.)

Special rates on Queens by the 100. Safe arrival and satisfaction guaranteed. Shipping season begins in April. Write for circular. It is FREE. **T. S. HALL,**
13Atf JASPER, PICKENS CO., GA.

BEE-SUPPLIES!
ROOT'S GOODS AT ROOT'S PRICES
Everything used by bee-keepers.
POUDER'S HONEY-JARS. Prompt service. Low Freight Rates.
NEW CATALOG FREE.
WALTER S. POUDER.
512 MASS. AVE. — INDIANAPOLIS, IND.

Found at Last!

A place where I am rearing QUEENS for Business, Gentleness, Beauty, and For Sale. Prices:
Untested, each, 75c; doz. $7.50
Tested, each, $1.00; doz, $10.

Either Golden or leather-colored strains warranted pure.

Remit by Postal Money Orders. DANIEL WURTH,
Queen Specialist,
17D4t KARNES CITY, Karnes Co., TEXAS.

Tip-Top Glass Honey-Jars

1-pound.

The pictures shown herewith represent the best Jars for honey that we know of. They are made of the clearest flint glass, and when filled with honey, and neat labels attached, they make as handsome packages as can be imagined. The glass top rests on a flat rubber ring, and is held in place by a flat steel spring across the top as shown. They are practically air-tight, thus permitting no leak, which is an important thing with honey-sellers.

¾-pound.

7-ounce.

We can furnish these Jars, f.o.b. Chicago, at these prices:

	1 gross.	*2 gr.*	*4 gr.*
1-lb. Jars	$5.00	$9.50	$18.00
¾-lb. "	4.50	8.50	16.50
7-oz. "	4.00	7.50	14.50

If you try them once you will likely use no other kind of top or sealing arrangement for honey-jars.

GEORGE W. YORK & CO.
144 & 146 E. Erie Street, · CHICAGO, ILL.

Italian Queens,
Bees and Nuclei.

We have a strain of bees bred specially for honey-gathering and longevity, at the following prices:

One Untested Queen	$1.00
One Tested Queen	1.35
One Select Tested Queen	1.50
One Breeder Queen	2.50
One-Comb Nucleus (no Queen	1.40

Tested ready now; untested in May. Safe arrival guaranteed. For price on Doz. lots send for catalog. J. L. STRONG,
16Atf 204 E. Logan St., CLARINDA, IOWA

HONEY AND BEESWAX
MARKET QUOTATIONS.

CHICAGO, April 7.—Choice to fancy white comb honey sells in a limited way at 15@16c per pound. There is no certain price for other grades, but they sell slowly at 3@5c less per pound. Extracted, 6@7c for white grades; ambers, 5½@6½c. Beeswax, 32c per pound.
R. A. BURNETT & CO.

ALBANY, N. Y., Mar. 14. — Honey demand quiet; receipts and stock light. Comb selling, light, 15c; mixed, 14@15c; dark, 13@14c. Extracted, dark, at 7@7½c. Beeswax firm, 30@32c.
H. R. WRIGHT.

KANSAS CITY, Apr. 2.—Our market is almost bare of comb honey; the demand is good. We quote you as follows: Fancy white comb, 24 sections, $3.50; No. 1, white, $3.40; No. 2, white and amber, $3@3.25. Extracted, white, 6½c; amber, 5½@6c. Beeswax No. 1, per pound. 25c
C. C. CLEMONS & CO.

CINCINNATI, March 11—The demand for extracted honey is good at the following prices: Amber, barrels, 5½@6½c, according to quality; white clover, 8@9c. Fancy comb honey, 15½@16½c. Beeswax strong at 30c.
THE FRED W. MUTH CO.

NEW YORK, April 8.—Comb honey is moving rather slowly of late and prices are somewhat declining. We quote fancy white at from 14@15c; No. 1, white, 13c; amber, 11@12c. Extracted quiet and easy, with plenty of supply. We quote white at 6½@7c; light amber, 5½@6c; dark at 5c. Beeswax steady at 30@31.
HILDRETH & SEGELKEN.

CINCINNATI, April 7—The comb honey market has weakened a little more; is freely offered at following prices: Fancy white, 14@15c; no demand for ambers whatever. The market for extracted has not changed and prices are as follows: Amber in barrels, 5¼@5½c; in cans, 6@6½c; white clover, 8@8½c. Beeswax, 28@30c.
C. H. W. WEBER.

SAN FRANCISCO, Mar. 11.—White comb honey, 12½@13½c; amber, 9@11c; dark, 7@7½c. Extracted, white, 6¾@7¼c; light amber, 5¾@6c; amber, 5@5¼c; dark, 4@4½c. Beeswax, good to choice, light 27@29c; dark, 25@26c.

Demand is fair on local account for water-white, uncandied, but there is not much of this sort obtainable. Market for same is firm at ruling rates. Candied stock and common qualities are going at somewhat irregular and rather easy figures, holders as a rule being desirous of effecting an early clean-up.

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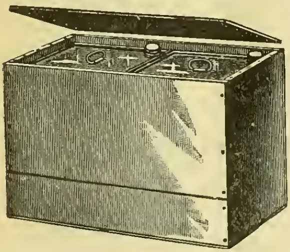

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Besides these dealers who get carload lots there are many local dealers handling supplies for their localities who obtain their supply either at Medina or of one of the above-named jobbers, as may be most convenient. These are dealers in general merchandise, or progressive bee-keepers, or others interested in improved methods of bee-keeping in their locality. If there is such a dealer in your vicinity, it will be to your interest to place your order with him; but be sure to insist on having Root's Goods, and do not accept inferior substitutes.

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Nat'l Bee-Keepers' Convention at Los Angeles, Aug. 18-20

AMERICAN
BEE JOURNAL

43d Year. CHICAGO, ILL., APRIL 30, 1903. No. 18.

WEEKLY

The Foot-Path to Peace.

To be glad of life, because it gives you the chance to live and to work and to play and to look up at the stars; to be satisfied with your possessions, but not contented with yourself until you have made the best of them; to despise nothing in the world except falsehood and meanness, and to fear nothing except cowardice; to be governed by your admirations rather than by your disgusts; to covet nothing that is your neighbor's, except his kindness of heart and gentleness of manners; to think seldom of your enemies, often of your friends, and every day of Christ; and to spend as much time as you can with body and with spirit, in God's out-of-doors—these are little guide-posts on the foot-path to peace.

—*Henry Van Dyke, D.D.*

THE AMERICAN BEE JOURNAL

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DEPT. EDITORS,
DR. C. C. MILLER, E. E. HASTY, EMMA M. WILSON

IMPORTANT NOTICES.

The Subscription Price of this Journal is $1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

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SENT BY RETURN MAIL.

The book contains 328 pages, is bound in handsome cloth, with gold letters and design; it is printed on best book-paper, and illustrated with over 100 beautiful original half-tone pictures, taken by Dr. Miller himself. It is unique in this regard.

The first few pages of the new book are devoted to an interesting biographical sketch of Dr. Miller, telling how he happened to get into bee-keeping. Seventeen years ago he wrote a small book, called "A Year Among the Bees," but that little work has been out of print for a number of years. While some of the matter used in the former book is found in the new one, it all reads like a good new story of successful bee-keeping by one of the masters, and shows in minutest detail just how Dr. Miller does things with bees.

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Stanley Queen Incubator and Brooder

An Arrangement that Allows the Bees Access to the Cells and Queens at all Times.

(Patent Applied for.)

One of the greatest objections urged against a lamp-nursery, or any kind of a nursery where bees are hatched away from the bees, is that the cells and their inmates are robbed of the actual care of the bees. When the bees have access to a cell, and the time approaches for the queen to emerge, the wax over the point is pared, and, as the queen cuts an opening through the cell, and thrusts out her tongue, she is fed and cheered in her efforts to leave the cell. A queen hatched away from the bees loses all of this food, cheer, and comradeship; and, until introduced to a nucleus, or full colony, has not the natural food that she would secure were she among the bees.

All of these objections are overcome by an invention of Mr. Arthur Stanley, of Lee Co., Ills. Mr. Stanley makes the cell-cups according to the directions given in Mr. Doolittle's "Scientific Queen-Rearing," sticking the base of each cell to a No. 12 gun-wad. By the use of melted wax these wads, with the cell attached, are stuck, at proper intervals, to a strip of wood exactly the length of the inside width of a Langstroth brood-frame. Two wire staples driven into the inside of each end-bar, slide into slots cut in the ends of the cell-bars, and hold them in position.

The process of transferring larvæ to the cells, getting the cells built, etc., have all been described in the books and journals, and need not be repeated here. When the cells are sealed they may be picked off the bar (still attached to the gun-wads); and right here is where the special features of the Stanley process steps in. Each cell, as it is removed, is slipped into a little cylindrical cage, made of queen-excluding zinc, the cage being about two inches long, and of such a diameter that the gun-wad fits snugly, thus holding the cell in place and stopping up the end of the cage. The other end of the cage is plugged up with a gun-wad. Long rows of these cages, filled with sealed cells, are placed between two wooden strips that fit in between the end-bars of a Langstroth frame are held in position by wire staples that fit into slots cut in the ends of the strips. To hold the cages in their places, holes, a trifle larger than the diameter of the cage, are bored, at proper intervals, through the upper strip, thus allowing the cages to be slipped down through the upper bar, until their lower ends rest in corresponding holes bored part way through the lower bar.

A frame full of these cages, stocked with cells, may be hung in a queenless colony, and will require no attention whatever except to remove the queens as they are needed. The workers can freely pass into and through the cages, cluster upon the cells, care for them, and feed the queens after they hatch, exactly as well as though the queens were uncaged.

These cages are unsurpassed as introducing cages, either for fertile or for virgin queens. The bees are not inclined to attack a queen in a cage to which they can enter, yet they can surround, caress, and feed her. They can become acquainted with her, and give her the same scent as themselves. When desirable to release her, one end of the cage can be stopped with candy, and the bees allowed to liberate her by eating it out.

By putting food in one end of the cage, a queen may be kept caged, away from the bees, the same as in any other cage.

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⁂

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AMERICAN
ESTABLISHT IN 1861
BEE JOURNAL
THE OLDEST BEE-PAPER IN AMERICA

43d YEAR. CHICAGO, ILL., APRIL 30, 1903. No. 18.

❊ Editorial Comments. ❊

General Manager N. E. France, of Platteville, Wis., wishes us to say that he sent to each paid-up for 1903 member of the National Bee-Keepers' Association, one copy of "Bees and Horticulture." one on legal rights of bee-keepers, and a sheet of 25 questions to be answered and returned to him; and to new members also a pin badge. Since then there have been two bags of mail containing a lot of the above lost in a train wreck, so if any paid-up member has not received his package, and will notify Mr. France, he will mail another.

How to Treat a Balled Queen.—At this time of the year the novice will sometimes find upon opening a hive that the queen is balled, although she has been in the hive for a year. He is puzzled to know why she is balled, and still more troubled to know what he shall do. The best thing he can do is to do nothing. The bees have balled their queen because disturbed by the opening of the hive—possibly they are balling her to protect her—and if the hive is immediately closed there is little danger that any harm will come to the queen.

But it is another matter when you find a stranger-queen balled. The probability is that the balling will continue till the queen is dead, and your business is to get her out of the ball. Two things *don't* do: Don't try to pull the ball apart; and don't blow *hot* smoke upon the ball. Either of these things will generally mean immediate death to the queen. You may blow cold smoke upon the ball, holding the smoker at a good distance, and at first it seems to have no effect; but keep steadily blowing for some time, and gradually the bees will loosen their hold and leave the ball, until the queen is left alone. Possibly the better way is to drop the ball into water; very soon each bee will be trying to save itself.

Establishing Distant Out-Apiaries.—The usual reason for establishing out-apiaries is that without them the home-field will be overstocked, and the nearer home the better so long as there is no overstocking, unless a better field can be reached by going to a greater distance. Of late there seems a tendency to favor the establishment of out-apiaries at great distances—a hundred miles or so from home—even when the field nearer home is not overstocked. It frequently happens that a certain location will give a fine harvest when a second location at a distance yields nothing, although the pasturage is the same in each, climatic differences accounting for the difference in the yield. Another year the second field may be the paying one while the bees are starving in the first. If apiaries be established in both places, one or the other will be likely to have its dish right side up, and so if apiaries be established at a sufficient distance apart, and at a sufficient number of points, there will be little danger of a total failure in any given year.

Possibly this establishment of apiaries at great distances may be a wise thing, but before acting upon it the question should be carefully considered from all sides. Of course, it will cost much more to run apiaries at greater distances, but if the total harvest be sufficiently increased that will overbalance the cost. Suppose we have a home-apiary and two out-apiaries, and suppose a field 50 miles north and another 50 miles south, each exactly like the home field, and that every third year there is a total failure in each field. The first year the failure is in the north, the second in the south, and the third at home. Each apiary in a good year yields 10,000 pounds.

Now, suppose the three apiaries are planted in the home field, say five miles apart. The first year will give 30,000 pounds of honey, the second the same amount, and there will be nothing the third year—altogether 60,000 pounds in the three years. Suppose, again, that one of the out-apiaries is planted in the field 50 miles north and the other 50 miles south. The first year is a failure at the north, but the other two apiaries give 20,000 pounds. The second year gives 20,000 pounds from the north and home apiary, and the third year gives 20,000 pounds from the north and south apiaries—no total failure in any one year, but—we have no more in the three years by one plan than we do by the other, just the 60,000 in the three years by either plan.

Before deciding, the practical question is this: Will the advantage of having the crop equally distributed over each year without getting any greater total in the three years be sufficiently great to balance the greater inconvenience and expense of the greater distances?

Statistics of Bees, Honey, and Beeswax, in the Twelfth United States Census Reports, are as follows: 4,109,626 colonies of bees; with a value of $10,186.516. The total production of honey in 1900 was 61,196,160 lbs.; of beeswax, 1,765,315 lbs., which, together, represented a value of $6,664,904. A grand total of $16,851,420.

Bee-keeping isn't quite so small an affair as some people might suppose.

And it is increasing every year.

The Arthur C. Miller Hive-Cover.—Within the past few years—indeed, within the past year or two—there has been unusual interest in the matter of improvement in hive-covers. Several new ones have been listed by manufacturers, and individual bee-keepers have done no little in discussing what constitutes a good cover, and in experimenting with regard to the matter. Among others, Arthur C. Miller, of Rhode Island, has been thinking to some purpose, and writes:

> I have just made 25 new hive-covers. The top consists of four or more narrow boards $\frac{1}{2}$ inch thick, tongued and grooved together. These fit into end-pieces or cleats $1\frac{1}{2}$′ wide and grooved. Before the grooved pieces are put on four or five thicknesses of newspaper are laid on top, and a piece of thin cotton cloth stretched over all, and held by three or four tacks. The paper goes only to the cleats, but the cloth goes over the ends of the top boards. After the cleats are on they are nailed from top to bottom, firmly fastening the upper and lower parts together and holding the boards firmly.
>
> Next, the cloth is drawn tight at the edges, held by a few tacks and a cleat nailed on. This makes a pretty stiff cover, which, owing to the narrowness of the boards, can not "twist" much.
>
> The next step is to give the cloth a good coat of *thick* flour-paste, and it is allowed to dry a day, when it receives a coat of thick paint, and later a second coat. This paste business is a trunk-maker's trick, and a good one. The cloth so sized shrinks tight and takes less paint. The paper makes a fine non-conductor, ahead of an air-space, and also keeps the cloth free from the boards, so that no shrinking or swelling wrinkles and cracks it.
>
> The paper part and the paste part I have tried and know about. The only part I am not sure about is the "twist" element of the narrow boards. The covers cost me here (without paint) 11 cents.
>
> ARTHUR C. MILLER.

Whether those 25 covers come up to expectations can perhaps be told only after they have been in use five, ten, or more years, but there certainly seem to be several good points worth considering in them.

The use of paste means an important saving of paint. Newspapers themselves have been considered good non-conductors, and several thicknesses of them with the air enclosed between them may, quite possibly, be equivalent to the $\frac{3}{4}$ air-space in double covers.

Certainly the expense will be less. With half-inch lumber securely fastened at the ends there can be no warping.

Twisting is another matter. A large proportion of lumber will twist with sufficient age. Cast-iron cleats holding the ends rigidly will not prevent twisting. But to have the greatest amount of twisting in a hive-cover, it must be made of a single board. Suppose a cover made of a single board twists to that extent that at one corner there is a crack of a quarter of an inch. Now make a cover of two boards instead of a single board, and let one of them be of the aforementioned twisting board. The crack at the corner will now be only an eighth of an inch, and as it will also be decreased in length it will not let in half as much air as the first crack. The crack will be still further diminished by the fact that the cleat fastened to the other board will have a restraining influence.

When the cover is made up of four or more narrow boards cleated together, the chance for twisting is reduced to a minimum. Of course, if it should happen that the four boards were of the same relative twist as if made of a single board, the result would be precisely the same as if the single twisting board were used; but a little figuring will show that the chance of such a combination is one in several hundred.

Formalin Gas as a Cure for Foul Brood is the title of a pamphlet published by C. H. W. Weber. Mr. Weber is very positive that by means of formalin we can be saved the necessity of destroying frames and combs, and full instructions are given as to the use of the drug, with illustrations of the box and generator used. Price of pamphlet, 25 cents. It can be ordered of this office.

Convention Proceedings.

Chicago-Northwestern Convention.

Report of the Chicago-Northwestern Bee-Keepers' Convention, held in Chicago, Dec. 3 and 4, 1902.

BY OUR OWN SHORTHAND REPORTER.

(Continued from page 262.)

PICKLED BROOD—BLACK BROOD—FOUL BROOD.

A Member—If pickled brood is left in the cell what would be the condition?

Mr. France—Pickled brood is entirely different; it never gets this ribbed and backbone appearance, flattened down across the sides of the wall; it seems to hold a roundness, and will turn up, if you please, very much like foul brood; they are very hard; you may shake the comb and they will rattle; they are loose; if you will take a pair of tweezers and press one of those it will come out readily; not so, however, with black brood; I had some samples of black brood, and, to my surprise, I was taking such good care of them they were beginning to mold a little in transit, so I put it in the stove to avoid all danger of getting it in my apiary. The one question I want to bring up now is, How does it look? Is there a question on that point?

A Member—In pickled or black brood won't the cappings be sunken and broken the same as foul brood?

Mr. France—There is a difference in them; with old foul brood these sunken cappings frequently have a tendency to be a little bit darker, although you would have to have your eye trained to notice the comparative difference; usually pickled brood has not a great deal of capping on it.

A Member—How long does it take before those cappings will shrink?

Mr. France—About eight days; about the same time the bees would cap it over naturally. As soon as they get it capped over it begins to shrink, and very soon thereafter there will be broken holes, quite often to the side of the center.

Mr. Clarke—When they are perforated that way is that before the larvæ begins to sink? Is it in the gases?

Mr. France—Yes, I think it is the gases. This bee will somehow take nourishment and grow.

Referring again to the case mentioned before, the night I was there the bee-keeper was so intent upon it he went that night; he was so anxious to get a crop, but had not had one for four years, although he used to get good crops, but when he brought some bees from another locality he had but little honey; that night he put them in empty boxes without foundation, and to keep any of them from deserting he screened the entrance; 48 hours afterwards he gave them full sheets of foundation on five frames; he confined them to five frames; as fast as those were drawn out he put in other three.

A Member—Why do we starve them for 48 hours?

Mr. France—We all know that the bee goes in good condition from the hive to the flowers; it gathers nectar from the flowers and brings it home in its honey-sac; if you can get these bees in the hives without filling themselves with disease, they will not take it afterwards. I have sometimes set another new, clean hive in place of the old hive, boring a hole from the top, putting the diseased colony very quietly in the evening, on top without closing the entrance; you have not disturbed them; they have to go down and out at the bottom, and when they come back they can not return; the next day put the queen in, and in three or four days you can take the hive off and they are transferred; but if I should advocate that, some one would make a blunder of it.

A Member—This dried scale that you were speaking of—this turned-up part—suppose now that the colony was affected with foul brood in the fall and we didn't know it, and if that hive—if we happened to examine that hive in the spring—would we still find that scale in the bottom of the cell?

Mr. France—Yes, last fall, at one of the Farmers' Institutes, a man came to me and said: "I believe I have something I didn't know I had; I am afraid my bees have foul brood; I didn't notice any odor; I do know this: I have some brood-combs that have that little, black, turned-up something." He showed me some of the combs at his house—some of those dried-up things; I could not see the ropy stage; these bees did have foul brood last summer; if I should go through your hives now we would see nothing at those stages at this time of the year. You will not find the ropy stage in 90 times out of 100—only these little black scales. Last spring I wrote him, and he said: "It is just as you said; when breeding began the next spring, and they put honey or larvæ into those cells of dried-down scale—that is where the mischief begins and ruins it." As soon as he had brood begin this year it was diseased. I have never seen a case of foul brood that I have not been able to trace to carelessness on the part of the bee-keeper, in almost every case; we speak about it being contagious, and we are to blame; our neighbor allows the disease to be out and exposed; our bees, which we can not fence in like our farm stock, are exposed, and they go out and gather the disease and bring it back again.

Mr. Moore—What is the point about letting 48 hours elapse before putting them on full sheets? Is it to allow them to consume diseased honey?

Mr. France—That is it; the moment we disturb the colony of bee-workers they load themselves with honey, and we have no way to get these bees to rid themselves of that honey except to starve them, and put them in the hive with foundation or without; if we screen the entrance the queen sometimes becomes discouraged and will swarm.

A Member—Is 48 hours absolutely safe?

Mr. France—I never knew it to fail in the honey-flow season. As to my experience with black brood, I have had but very little; I found a case in our State and traced it from New York; I bought it at my own figure and disposed of it rather than to have any experimental work; there is this difference—black brood has somewhat of a turned-up appearance, but it relaxes; it has decidedly a different odor. I would liken it to a carpenter's glue-pot that has become spoiled; it has somewhat the odor of stale furniture glue. Black brood would have more of the odor peculiar to sour apples; if you have taken some apples and thrown them out in a little bunch and let them lay—it has somewhat the odor of those decayed apples. It also has somewhat the tendency to dissolve the wax of the side-walls of comb, but I have never known foul brood to injure the comb; that seems to remain perfect; again, these little, black, dried-down scales on the lower side-wall, which just the end would show looking in here [indicating], in that stage the comb looks apparently clean, and I fully believe, so long as that comb has not been subjected to heat sufficient to kill the germs of life, there it will remain dormant and renew its power to destroy as soon as the bees put in their honey, pollen or larvæ.

In one of our counties just north I saw a peculiar instance. I was passing by with my liveryman—seeing some bee-hives, and it being noon-time, I said to him: "I would rather eat dinner with a farmer bee-keeper than to go to the hotel." We went in and I took dinner there, and he wanted to know my mission, and so on; he said to me: "My wife has a swarm of bees; I used to have a good many swarms and they all died." He was anxious to keep bees, and, being a mason by trade, he had sealed the entrances of those hives; eggs had been deposited there, and he had stored away those hives with those black scales in, in the granary; eight years afterwards a swarm of bees came there and alighted in an apple-tree back of the house. The wife, not knowing where those hives were, took a square cracker-box for a hive and put the bees into that, and they did fairly well, in a good, old-fashioned way; they filled up the box. She wandered off on missionary work one day to some of her neighbors, and being away the next time they swarmed he, coming down from the field, saw the bees out on the tree. "Now," he thought, "I have some hives, I will hive them on a full set of clean combs;" and he did. He wanted me to examine the hive. I turned it up and got that peculiar odor. I said to him: "I want you to know to your satisfaction that I am right." I opened it up and took out the comb, and there were the sunken cappings, the ropy stage, and plenty of it; and over in the corner, where there was no brood at all, I found those black, dried-down scales of eight years ago. Then I went up to the granary and found many diseased combs there. I told him to make up a good fire in the big iron kettle and we would fix it.

A Member—Would you work on the McEvoy plan, or starve the brood?

Mr. France—Well, if I mistake not that is the McEvoy plan; we starve them just long enough to get out of that little bee the diseased honey.

A Member—I shook the bees off on starters and left them to go in and out as they pleased. The starving plan is closing the hive up with screenings, and the bees worried themselves to death; when I tried it I lost almost half of them.

Mr. France—If you screen them, and put them in a cool place and give them a little water they will be all right, otherwise they get annoyed; in almost all cases I leave the hive open, narrowed down to keep the robber-bees from coming in.

A Member—Providing a number of combs that had contained foul brood had been stored away, how long afterward might the odor of foul brood be detected—one, two, three, or four years?

Mr. France—I don't think you would get very much of it a year afterwards; it becomes so dried down and hard it would be hard to detect it.

A Member—What is the first stage by which it can be detected? If you don't know you have it in your yard how do you go to work to find it?

Mr. France—I question whether the naked eye could detect it; there would be no difference in the outward appearance.

A Member—In regard to the perforations—is it not a fact that you can not go to a healthy colony and find those perforations in the cells? Isn't it about 99 cases out of 100, you may say, that you do find those perforated cappings? It is just as if you had put a needle or pin in the cell. Is that not unmistakably foul brood?

Mr. France—Pickled brood may have; it is a very good guide-board.

A Member—With the foul brood the cappings don't begin to sink until after the gases leave the larvæ, do they?

Mr. France—Just as they begin.

A Member—Directly the gases leave the larvæ, which causes pressure on the top of the cell, directly the gases are released by that perforation, you may say the cappings then recede and have that sunken appearance, don't they?

Mr. France—Yes.

(Continued next week.)

Amerikanische Bienenzucht, by Hans Buschbauer, is a bee-keeper's handbook of 138 pages, which is just what our German friends will want. It is fully illustrated, and neatly bound in cloth. Price, postpaid, $1.00; or with the American Bee Journal one year—both for $1.75. Address all orders to this office.

Contributed Articles.

Rearing Long-Lived Bees and Queens.

BY DR. E. GALLUP.

DEC. 16 and 17, our Southern California Bee-Keepers' Association had a meeting in Los Angeles. I dropped in on the 17th and was told they had drawn Gallup "over the coals" for condemning all our Eastern queen-breeders. Of course, I denied that point-blank. But I did, and do still, condemn the rearing of queens and having the cells built and cared for in small nuclei. It is positively the deterioration of our bees in the worst possible manner. So when I came home on the 20th, here was the American Bee Journal and C. P. Dadant's article. Now, can it be possible that I am such a dull writer that I cannot make myself understood, or what is the matter?

Now, Mr. Dadant, you say it would be a waste of time for anybody to tell you that your bees were inferior, etc. Did Gallup ever tell you that queens reared in the manner you speak of were inferior? Certainly not, for that is exactly what I have been teaching.

Mr. Dadant sums up finally, by saying, "In my opinion we must rear our queens in good, healthy colonies," and here again I do not disagree with him one particle. I have reared just as good queens as can be reared in this manner. Take my best colony in every respect, and I prefer the leather-colored queen instead of the light-colored one; make the colony extra strong in numbers, by filling the hives to overflowing with nursing bees from other colonies. Now I am so foolish as to think that I get more good cells built in a colony thus prepared, and am sure to get every cell with an extra-large amount of royal jelly to support the embryo. Every cell will contain a good queen, etc.

We do not have any poor cells and poor queens to destroy or discard; Mr. Alley says he does with his nucleus-reared queens. Now, my 36-frame hives were the small Gallup frame, not the Langstroth frame. I only spoke of one queen living 6 years, and her wing was clipped, so that I know. I received the queen from Adam Grimm as a present, and did not use her in my 36-frame hive, as it was before I even thought of getting up such a hive. I know that I have had a number of queens since that lived 4 or 5 years. I futhermore know that I have had quite a number of queens that would, and did, occupy 16 Langstroth combs with brood; I have had 3 within the past two seasons—tramp swarms—that I picked up, and naturally reared at that, and common black bees, no one had anything to do with their rearing.

When I took Mr. Kenny's bees, in Ventura county, I selected 2 leather-colored queens in 10-frame Langstroth hives to breed from. I commenced stimulating the first of February with diluted honey. I used the hives two stories high, both queens fully occupied 16 frames with eggs and brood, and I had 36 good queens from them by natural swarming, saving every one of them. I hived the 2 swarms when they came out, on ready-made worker-combs, and in 21 days each queen had its 16 combs filled with brood and eggs. I sold out to Mr. McIntyre, and he said in the convention the other day that that stock still leads all the apiaries in that section of the country for productiveness and profit. He is the Secretary of our Association—I say "our," because they unanimously elected Gallup an honorary member. He says there is not a queen in existence whose bees live from the first of May until the first of September. Well, I guess that is so.

Now, I must tell the circumstances, surroundings, etc.: When I moved to Iowa I purchased 65 acres of land in the edge of a body of heavy timber, and clean, rolling prairie, one mile out. I purchased the timber as a splendid location for bee-keeping, as I had lived on the open prairie in Wisconsin and did not like the locality for bee-keeping, as it was too windy, and not a good variety of flowers. Well, I cleared up 6 acres, and yarded my sheep on it; they killed all the sprouts, and in two years pretty thoroughly covered the land with rich sheep-manure, and then I sowed it to white clover and got a splendid stand. This was the first white clover in that part of the State. I cleared up a few acres more for orchard, vegetable garden, etc., on the east side of the house; the clearing was a strip of land, before coming to the prairie, half a mile wide, covered with oak and wild plums, choke, black and red cherries, wild crab apple and thorn-apples, etc.—all one mass of bloom in their season. On the west side was heavy timber consisting of rock and white maple, three varieties of elm, willows on a small creek, lowland and upland basswood; so the blossoming was prolonged for four week; different kinds of oak, black walnuts, etc., four different kinds of goldenrod, all right in the timber, and no wind at all as the bee-forage was perfectly protected by the timber on all sides.

My white clover patch was so perfectly manured and protected that it produced large quantities of nectar. There was no forage of any kind to induce the bees on the open prairie. My hybrid colony swarmed some time the first week in May; I killed the queen in the swarm, and introduced a natural queen-cell, cut out 8 queen-cells from the old stand, examined everyone and found the umbilical cord attachment. After seeing the umbilical cord, the first one I ever saw from the basswood log, I had examined over 100 cells and found none, and began to think I must be mistaken when I saw my first one. In dividing colonies and compelling one-half to rear cells there is no cord; in rearing queens in nuclei there is none. But in natural swarming we find them, and in natural superseding.

Now comes a question, and I am like Dr. Miller, "don't know," because I never have examined to see. Is there an umbilical cord attached to the nymph or embryo where we take away the queen from a populous colony and compel them to rear a queen? That is the question before the house. Now, my observation goes to show that the cord is placed there for a purpose, and that purpose has something to do with the longevity of the queen. We may not be able to discover any material difference in the first two or three generations, where no other requirements are lacking for rearing first-class queens, but in the end it will tell. It tells at once to the observing person, where we divide our bees and compel one-half to rear queens.

Now, Mr. Dadant, as I have told you just where to look for that umbilical cord, look for yourself, and you will be a great sight better satisfied than you will be to have some professor to tell you. You will have no trouble in seeing or finding it at all; anyone can see it or find it when he looks in the right place, and at the right time, without a microscope or magnifying glass; and if you are as astonished as I was when I saw my first one, it will pay you to investigate.

Now I will get back to that hybrid colony. They were peculiarly marked, so that I could not possibly be mistaken in them; they were quite numerous up to the last half of August, and quite a number showed up on the first week in September, but they were very old looking, hair all gone, and almost coal-black. Remember, they were perfectly sheltered, and had no winds to contend with. The bees from Mr. Alley's two queens that he sent me were all gone by the first week in February. There was no disease about them, they simply died with old age. The queens were both alive, one had barely a few bees, but not enough to occupy two sides of a comb; the other had probably a trifle over a gill of bees, all gone in the winter in just three months. Here was short life with a vengeance. Those bees did not die in the hive but flew away themselves, to die.

Orange Co., Calif., Dec. 28.

How Bees Feed Each Other—Stimulative Feeding.

BY ARTHUR C. MILLER.

MR. DADANT has an interesting article on stimulative feeding, on page 231, but unfortunately for the value of his deductions they are based on erroneous premises.

It is not pleasant to charge so careful and usually painstaking a man as is Mr. Dadant with ignorance of ordinary bee-life, but feeling that he is as anxious as anybody for the truth, and that he will accept my correction in the kindly spirit in which it is intended, I will without further apology show wherein he is wrong.

1st. He says bees returning from the field instead of depositing the load in the cells often hand it over to a young bee so as to get off to the fields again.

Possibly bees sometimes do this, but I have never seen it, and I have watched bees pretty closely. Further, such an operation would delay rather than speed the bees' movements, because it is a very short operation for a bee to empty the contents of her honey-sac into a cell, but it is a slow operation for another bee to suck up a load with her proboscis.

2d. Whenever one of the young bees with one of these transferred loads "meets a queen she respectfully and deferentially holds out her proboscis towards her and offers her a taste."

Food is never given on or by the *tongue* of the giving bee, but is taken from that bee's *mouth* by the tongue of the receiving bee. The disgorging of food is done with the proboscis folded back. Furthermore, bees, except in feeding brood, never voluntarily give food; it always has to be asked for, and sometimes almost taken by force. Also, it is not fresh nectar which is given to the queen, but digested pollen and honey, *i. e.*, chyle. I have never seen food *offered* to a queen, the "show of tongues" when she is taking food merely being an attempt on the part of the bees to get a taste of the coveted "pap."

As to the bees' deferential treatment of the queen, it is all a mistaken idea. Except during a peculiar operation which I have termed "grooming," bees never show anything which approaches respect or deference for their mother. I know these things from my own oft-repeated observations, and have shown them to others.

3d. When bees are not harvesting they are quiet. "If the bees are fed sparingly and often, they are *stirred up and create more heat.*" (My italics.)

That is a clue to the increase in the queen's laying, the increased activity with its resultant increase of heat. Having kept bees chiefly as a pastime I have probably devoted much more time to experimenting than persons who keeps bees for a business. But as a hobby which pays its own way is always more pleasant to ride than one calling for cash, I have always tried to make the bees pay their way, and have succeeded. Among other experiments were many on stimulative feeding in the spring. All sorts of food, fed in all sorts of ways, and to all conditions of colonies, at last forced the conviction that "stimulative feeding" was always done at a loss; that the best time to feed the colonies was in the fall, and that colonies worth wintering when given sufficient food then were in the best of condition in the spring, and for the harvest.

4th. In the example cited by Mr. Dadant, where a colony kept up a business of slow robbing, he attributes its great increase to the acquisition of the food. If the results were the same in the majority of cases such a conclusion might be drawn, but I have not been able to obtain even a fair number of colonies that responded thus to slow feeding. But it should be noted that when the unintentional feeding was progressing, the weather was such that the bees could fly out daily, and that they, to all intents and purposes, were getting a natural supply of food. It is not possible thus to feed a whole apiary, nor can we pick out the needy and set them at sly feeding. Feeding in the hive or at the entrance is entirely different. If a colony at that season can double itself in a month we may be confident that there was behind that growth some far more potent cause than a "one bee at a time" food-supply.

Providence Co., R. I.

No. 1.—Queen-Rearing—Are We Advancing or Retrograding?

BY G. M. DOOLITTLE.

A YEAR or two ago, much stress was laid on our rearing better queens than we had been doing during the past, and many new thoughts were expressed along this line, looking toward an advance. Then the matter seemed to wane somewhat, and lately I notice some thoughts expressed which seem quite contrary to those of two years ago. I find some arguing that a pint of bees, if of the right age, will start queen-cells and rear better queens, than will a large number of bees without any special reference to their age; and that "nearly every bee-keeper nowadays" starts his cells by taking a pint or so of young bees to do it with. This pint of bees is to be taken and caged in such a way as to cause them to be very sorrowful or like children having lost their parents, and that they have been kept thus till they mourn themselves almost to death, then these young bees, even if there is only a pint of them, will rear better queens than will a whole colony in a normal condition. Is this correct? Can this be an advancement?

It is claimed by some that the queen-breeders of the past did not know that "young bees were the chief essential to queen-rearing, and without them success is impossible." Such claims can only be made through a lack of being conversant with the literature of the past, for considerable was said on this subject during the latter seventies and eighties, in opposition to the claims then made, that all that was necessary to rear good queens was to put a frame of brood in a hive and set the same on the stand of a populous colony, after removing said colony to a new stand. Such a procedure was spoken against by many, on the ground of its not providing young bees for the work of queen-rearing. The author of "Scientific Queen-Rearing" plainly states in that book, that "Nature designed young bees to do this work," and that book was written during the year 1888, and the experiments leading up thereto were conducted during the previous five years. To be sure, these young bees were not caged, a pint at a time, for this work, for such would have been considered as a move in the wrong direction, as it undoubtedly is now. Why go to the extra work and expense of caging a pint of young bees when such are in the upper story of any populous colony by the thousands?

All careful observers know that very few but young bees, of the right age for queen-rearing, are in the upper stories of our hives during the working season of the year. Why cause the bees to "thrash and mourn at the loss of their queen and brood," and be thrown into an exceedingly abnormal condition, under which conditions no really good work at queen-rearing can be done, as is shown by the short life of queens so reared, and their workers, when all know, or should know, that the best, long-lived queens, giving long-lived workers, are reared only when a colony is in as nearly a normal condition as possible? It is far easier to set a frame of prepared cell-cups into an upper story of a colony, where there are thousands of young bees of the right age, in a perfect normal condition, than to adopt all the "fuss and feathers" of catching and caging a pint of bees, and then throwing them into a frenzy and an abnormal condition, only to get inferior queens in the end. And this has to be done every time a batch of cells is to be reared, while with the normal plan as given in "Scientific Queen-Rearing," that gives the best, long-lived queens, (as thousands who have used that plan can testify), one preparation of a single colony in early spring, will give a batch of perfected queen-cells, of the highest order, three times a week during the whole season.

Accepting and advocating a plan for rearing queens with only a pint of bees, can only prove a backward movement, with all desiring the best of queens, or the improvement of stock; and the only plea I can find for such a mode of procedure is that a person may be able to place a maximum number of queens on the market at a minimum cost. If the statement that, "Nearly every bee-keeper nowadays starts his cells by taking up a pint or so of bees," be true, the bee-keepers of "nowadays" are to be pitied, for to rear good queens the warmth of the cluster must be kept up to a temperature of from 95 to 98 degrees, as I have proven several times with a self-registering thermometer; and no pint of bees can maintain this temperature, except in very warm weather. With the advent of a cool day or a cold night, the embryo queens would be partially or wholly chilled, all of which would be very much against any good results.

But we are given to understand that the reason why this pint of young bees will do such good work, lies in the fact that they are all of the right age, without any old bees, for, say they, these "older bees are a detriment." I wonder how many believe such a statement as that. Can it be true that all of the good queens that have been reared from the time Samson found the colony in his lion's carcass, down to the nineteenth century—which brought to us the stock from which our own bees sprang in so nearly a perfect condition as we found them—were reared without these detrimental (?) old bees? No one can believe such a proposition. Old bees are as surely needed in the production of good queens as are the young ones, even if they are worthless at cell-building and supplying the royal larvæ with chyle for their growth. And the science that tells of no old bees for queen-rearing is wrong.

In order that the young bees may do their part, the old bees are needed to bring in forage from the fields, and keep up the proper temperature of the hive on cool days and cold nights; and especially to keep the colony in as nearly a normal condition as possible, without which no good queens can be reared, unless these conditions are kept up artificially by man, the latter two of which even man cannot supply in any other than an imperfect way.

In all the experiments I have made, trying to keep up the right temperature for queen-rearing with very small colonies, I have failed. For the same has always resulted in a delayed development on account of the temperature falling too low during cold spells, or the thing has been an entire failure on account of the temperature running too high for a short period, which is sure to result in the death of the embryo queens.

From all the experiments that I have tried during the past 30 years of effort at improved queen-rearing, I am convinced that the best of queens can be reared only where a colony is strong in numbers, with bees of all ages, and the conditions the same, or very similar to, what they are during times of natural swarming, and in cases of the supersedure of queens; and I say this after having tried all of the plans of caging bees, etc., that have been put before the public.

I believe it to be of far more importance to us of the present, and to those who are to come after, as well, that we bend every effort to improve our bees as much as possible, using only the plans which give the best, rather than in trying short-cut plans that we may distance some others who are trying to see how cheaply they can produce queens and place them on the market. Onondaga Co., N. Y.

A Plan to Prevent Swarming.

BY R. F. HILL.

THE plan to prevent swarming practiced by the bee-keepers in this locality seems to be exceedingly simple and successful, and I give it as follows:

The hive in general use is the ordinary 8 frame. As soon as the bees appear to be crowded, or show disposition to throw off a swarm, a hive filled with combs or foundation is placed on the old stand. Two frames of brood and the queen are removed from the old hive and placed in the center of the new. If any queen-cells are discovered on the combs, they are destroyed. A queen-excluder is placed over the new hive, and, the old one, after the combs have been carefully inspected, and royal cells destroyed, is placed on top. All ingress and exit from the old hive is down and through the new one, which the bees will immediately fill with honey and brood. As soon as the brood is hatched from the old combs, there being no further eggs laid, the bees clean out and fill with honey.

The process of placing new hives under old ones continues all season, in many cases as many as 4 or 5 hives being stacked one above the other, the queen-excluder being always kept next to the parent colony. If this plan is followed, there is little or no trouble about swarming, and less about queenless colonies.

This, of course, refers to the production of extracted honey, but it certainly produces a strain of bees that are little inclined to swarm.

My own experience and opinion about bees is that there is a whole lot of humbug about prolific and long-lived queens. The poorest queens appear to lay a great many more eggs than I have any use for, as it keeps entirely too large a proportion of the bees employed as nurses, and too small proportion as honey-gatherers.

The plan just outlined delays the egg-laying process, because the queen has to wait until the new cells are prepared.

If a colony becomes weakened the most practical way is to remove a few frames of brood from a strong colony, or else shake them out into a stronger colony.

Wormy frames, and queens that permit worms, I immediately get rid of. Ramsey Co., Minn.

Honey as a Health-Food is the name of a 16-page leaflet (3½x6 inches) which is designed to help increase the demand and sale of honey. The first part is devoted to a consideration of "Honey as Food," written by Dr. C. C. Miller. The last part contains "Honey-Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by every one who has honey for sale. It is almost certain to make good customers for honey. We know, for we are using it ourselves.

PRICES, prepaid—Sample for 2 cts.; 10 for 10 cts.; 25 for 20 cts.; 50 for 35 cts.; 100 for 65 cts.; 250 for $1.50; 500 for $2.75; 1000 for $5.00. If you wish your business card printed at the bottom of the front page, add 25 cts. to your order.

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

A Wet Spring and the Bees.

Rain, rain, rain, how it has rained for three days, and how things are growing; the grass looks as if it might be the last of May instead of the 15th of April. If the bees survive the changeable weather it surely does look as if we ought to have a big crop of honey this year. But you never can tell; it is not safe to count on a honey crop before you get it.

The ground was so full of water last fall, and we have had so much rain this spring, that the bottom seems to have fallen out of the roads—not for years have we known anything like it, so that we have not taken our bees to the out-apiaries yet, but expect to haul them soon. I am always glad to get them located, then it seems as if business had fairly begun.

As I stood watching the bees the other day I was surprised to note the number of different kinds of pollen they were bringing in, and they were fairly tumbling over one another in their eagerness to get out.

In the spring we always close the entrances of our hives by means of an entrance-block, so that only a very small entrance is left—about an inch square. On very warm, pleasant days, it would seem as if it were almost too small, and the bees come tumbling out one over another, seemingly resenting such an arrangement; but when the thermometer takes a sudden drop, and the snow begins to drive, and the cold wind howls, then I am sure they appreciate it (at least we do), as I feel pretty certain it prevents brood from being chilled—something like putting an extra cover on the bed, you know.

Watering the Bees—Sunflowers, Etc.

Some three years ago I read about spring dwindling of bees, that they go out to get water and many get chilled and do not get back; and that occurring every day was partly the cause of spring dwindling. I read about it in the American Bee Journal one evening, after I went to bed. Before I went to sleep I had them all watered (in my mind), and I soon put it in practice by having a little trough at the entrance of each hive, so all they have to do is to come out to the trough and get the water, and go back. The troughs have a little piece nailed on each side of one end that goes into the entrance; it fits up close against the hive. I have the entrance in the middle of the hive, so it is at one edge of it. The troughs are 9 inches long, 4 inches wide, and 1½ inches deep. I am going to make some more, but I will make them deeper, so they will hold more water; the ones I have hold only a pint. I will make the strips wider. I nail the strips on the side of the bottom part, making it the same length as the bottom piece, then the two end-pieces across the end of the bottom-piece and the ends of the pieces that I have nailed on the side. They have to be sawed true, so as to be water-tight, or they will leak all the water. I cut the stalks of my erianthus grass and lay it on top of the water so the bees will not get in and drown. Anything that will float will answer to keep them out of the water. Of course, this is for the sisters who are keeping bees in a small way like I am.

My bees had a flight Dec. 2, and three in February, so I think they will winter all right; they seem strong when flying.

Either I or some one else made a mistake in my last article about my age; it should have been 75 instead of 79.

Yes, I can use a plane and saw as well as a hammer. I can saw on a straight mark as good as any man. I can do fancy-work, and a good many other things that do not belong to the bee-business. I raised a good many sunflowers last summer, and the bees would work on them until they were as yellow as the flowers. I had 90 quarts of seed; my pigeons are very fond of them.

The article in the American Bee Journal about the spider-plant, and how to raise it, is worth half the price of the journal. I did not know why I could not get it to come up until I read that article. I have saved a lot for the bees, and want to plant a lot more this summer for them, and have the seed to feed to the pigeons.

I can agree with your mother, Miss Wilson, about tea and coffee. I have not used either for over 50 years, and I seldom drink anything at meal-time, as I think it more healthy to eat without drinking. I use a good deal of fruit-juice put up as fruit. MRS. SARAH J. GRIFFITH.

Cumberland Co., N. J., March 9.

The Afterthought.

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, O.

GETTING EXPERIENCE WITH INCREASE.

Neither novel nor ever likely to get out of date—is Dr. Gallup's advice to those desiring to start apiaries. Begin with very few, and make your colonies. You don't know so much about bees but that what you learn in the process will more than pay you for the time you lose. So doing, the purchase price of a lot of colonies is saved, and is a clear gain to you. Page 182.

GROWING BASSWOOD TREES.

I can testify that basswood seedlings three inches high—neglected and not in their natural soil—do not always come to naught. But all the same, J. D. Gehring's advice to get a load of dirt from where basswoods naturally grow seems to be sound. But the dirt alone, possibly it may not entirely prevent the slaughter wrought by the scorching mid-summer sun of the first season—if that is the main trouble. Who knows? Page 183.

DIVISION RATHER THAN SHAKEN SWARM.

It's a division rather than a shaken swarm that Geo. W. Stinebring tells us about on page 183. Good thing in its way—although with a colony at swarming strength, looking over the combs and setting aside the comb the queen is on, is not likely to float on as smoothly as the reading of it does.

INFORMATION REGARDING BEE-CULTURE.

"Please send information regarding bee-culture," eh? Surely, there is latitude enough. Natural for innocent outsiders to suppose that we department folk must have *some* information on hand. Why not trot a sample of it out? Supposing it had been a man, and that he had fired his request point-blank at the whole staff, perhaps he might have got the maxims below:

Bee-culture is not designed for women-folk.

Bee culture is specially adapted to women—and children, and invalids.

Bee-culture is a plain bread-and-butter affair, and sentimentalism mustn't be allowed to get into it.

Bee-culture is a science, a fascinating science, and if incidentally some profit arises from it no right-minded bee-culturist should be too much taken up with that.

Bee-culture is a boundless mint of money—'cause you go in and make your capital as you go along—and bees work for nothing and board themselves.

Nobody gets rich at bee-culture—and "off years" keep coming in which you do not make anything—and bad winters in which your capital disappears.

Bee-culture has nothing in it at all—unless you start a bee-paper and get rich at that.

Bee-culture is so nice and neat.

A leading objection to bee-culture is that it is so miserably dirty.

One of the most independent of all ways to live.

Too sadly dependent on the city commission man—'cause one's product is not a staple, and there's no reliable market for it.

The main objection to bee-culture is that you might get stung.

The getting stung part is too trifling to be thought of.

So nice to be considered a higher order of being than plain farmers.

So "nice" to have everybody say, "He don't work for a living; he just fusses with bees." Page 184.

(You see by the above that this is house-cleaning time, and so the proper season to hang out musty samples of information on the line. Misery!! By the time this gets into print they'll say, "How *late* your house-cleaning comes!")

BLACKS AND ITALIANS IN BAD WEATHER.

An idea advanced by Geo. B. Whitcomb, page 187, may have something in it. Claimed that in very rainy localities black bees will be patient and stay in the hive whenever it is unprofitable to be out. Also claimed that Italians are pretty sure to be impatient and reduce themselves to ruinous weakness by going out in bad weather. Wonder if the sliding screen in front, which we had up a few weeks ago, could be made to help in this case.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

Management for Increase.

I have 28 strong colonies and want to increase to 50 if possible this season, and would like to do it artificially as I think it will save a lot of time. This is my second season with bees. How shall I proceed? Would it do to divide the frames just before they are ready to swarm? and is it best to put frames of foundation in the old colony where I take out the frames of brood? ONTARIO.

ANSWER.—Yes, one of the simplest way is to divide each colony into two parts before the bees swarm. Leave the old queen on the old stand, and put more than half the brood with adhering bees on a new stand, and they will rear a queen. Fill vacancies with frames having full sheets of foundation.

But that's far from the best way. Just what the best way is, depends upon circumstances, and it would take more room than the patient editor would allow us in this department to go fully into the whole subject of artificial increase. Study up general principles in your text-book, and you will be better prepared to judge what is best for you. If there's any special point in the text-book that needs further elucidation, ask all the questions you like—that's what this department is for. If the editor can't get it all in with the fine type he's using, he can put some of it in lead-pencil around the margin! Artificial increase is perhaps given more fully in "Forty Years Among the Bees" than in any other book.

Light in Supers—After-Swarms.

1. Will light getting in between the supers and brood-chamber, or under the cover, have a tendency to keep the bees from working in the super? I have some supers that do not fit snugly, but I can use packing to exclude the light if it is necessary.

2. In case of after-swarms, what would you recommend doing with them? VIRGINIA.

ANSWERS.—1. Perhaps the light would do little or no harm, but on cool nights it isn't a good thing to have cracks admitting the cold.

2. Return them, or unite two or more of them, unless you want the increase. Better still, prevent them. Set the swarm on the old stand with the old hive close beside it, and a week later move the old hive to a new place.

Questions on Wintering and Swarming.

1. Can I make a standard Langstroth or a Danz. hive a safe place for bees to reside in during the winter in northern Illinois? If so, how? Laying aside the loss of honey (salable), wouldn't you advise Jumbo or Dadant hives?

2. If I raise the coffee-sacking or burlap with cobs or sticks, the bees usually come up and cluster above the frames in cold weather (for me) in outdoor wintering. Is this as well as to keep them down on the frames? It seems to me that those bees that have to stay in those narrow spaces between the honey, near the top of frames, must need have sore throats—and they are the ones, perhaps, that have rheumatism in their shoulders and can't fly in spring-time.

3. Will the weight of honey in a 10-frame super sag the T tins in the center so as to make the ¼ bee-space too narrow?

4. Are the side supports of the loose T tins set into the base of super? If not, is there not a vacant space left for the bees to propolize and to let in cold air? You need not answer this if you think I would better buy one and look for myself.

5. I have the most of my bees now that show three yellow or bronze bands. Their queens do not run excitedly, and the bees act, I think, in quite a proper manner, waiting, as a rule, on the comb near or over the young, and generally receiving with kindness if I am polite in my calling; but these bees have mostly, or entirely, black or hybrid ancestors. Are they Italians? Of course, I have been choosing their mother and brothers from the better colored queens for several years, and there are now colonies in which I can seldom find a bee which does not show 3 lighter bands. Do you think that bees from Italy would be willing to "sit in the same pew" with them? and could they breast so strong a wind as those who helped tempt the Vandals to Rome?

6. I spent last evening reading "40 Years." Now, after I "put up the queen" and the bees below have started cells, (page 164), I give them a cell about ready to hatch, of my own choosing. After the queen from this cell begins to lay, I "put down" the old hive, having removed its queen 2 or 3 days prior, and unite the two. Will this hold the whole union from swarming? We could get a young queen and a good swarm this way, but would the "put down," not knowing that the "holdens" below had reared a young queen of the "current year," give the whole union the "fever" or would the aborigines tell the prodigals that they had a current queen now, and that she was not going to move until next spring?

7. Would an inserted cell act on swarming the same as a queen hatched from one of their own cups?

I have good reason for believing that a young queen feels as you say about swarming. ILLINOIS.

ANSWERS.—1. You can make them safe by having a lot of extra combs of sealed honey, and using these fall and spring. But the larger hives are safer. I got as much honey from 10-frame hives as from smaller ones, but it was harder work handling them.

2. Being above the cluster, they ought not to suffer; but there is really no need of any more space for the bees than just enough for them to cross over the top-bars.

3. The upright part of the T tin does not allow the least sag.

4. There is no trouble whatever. If sheet-iron is used, the thickness is not enough to count. If bent staples are used, they are mashed clear into the wood, so not the slightest space is left.

5. In spite of the apparent prevalence of black blood in their ancestry, your selection seems to have been such that Italian blood prevails, and your bees can hold up their heads as high as any "to the manner born." The crossing is rather an element of strength than of weakness.

7. Let's get at the principle—if we can. Other things being equal, a young queen is less likely to swarm than the older one. But if the young queen is *in the right surroundings*, she'll swarm about as surely as an older one, for the condition of the brood is a very important factor. I *think* that the chief reason why a colony does not swarm with queen reared in the hive the current year, is because of the condition of the brood, there having been for some time no young brood to feed. So when you put down brood that has been queenless only two or three days, they have the stuff to swarm with, and they may swarm.

7. An inserted cell will result exactly the same as one of the same age built by the bees themselves, providing there's no change in the brood.

Management at Swarming-Time.

I caught 10 colonies of bees in box-hives, and I would like to know if it will do in swarming-time to pick the box-hive up bodily and shake the bees out, put a new hive with the bees on the stand, and put the old hive in a new place?

My first experience with bees was last spring. I caught a colony in a box-hive, and they swarmed 4 times, and what remained I drummed out and divided them between the last two swarms. From the first swarm I got 72 sections well filled; from the second I got 48 sections. I don't want so much increase, for I have now 19, all told—10 in box-hives, and 9 in 9-frame hives, called the "Jones Combination Hive." ONTARIO.

ANSWER.—Yes, it will do to shake the bees out, *if you can*, and if you make sure to get the queen with them. You will probably find it easier to drum them out.

Catnip.

1. Will catnip grow on sandy soil?
2. Does it prefer shade or sun?
3. Will it blossom the first year? WISCONSIN.

ANSWERS.—1. Yes, if not too sandy.

2. It seems to have a partiality for hedgerows, but that may be more because of the protection, for it grows well right in the full blaze of the sun.

3. I think not.

Forced Swarms—Wintering Bees.

1. In your comments on the "A B C of Bee-Culture" (No. 307, page 6). Do you put a super on the new swarm at once when hived? Do you use an excluder?

2. In the forced-swarm method do you use starters or full sheets of foundation? Do you put on a super at once, and do you use an excluder?

3. If one uses full sheets of foundation in the brood-frames, will the bees change worker-cells into drone-cells when they get ready? If so, how would it work in forced swarming to melt up the comb in the old hive after the second drive and replace with starters? If done every year would it keep down an excess of drone-comb?

4. The last two winters I have put on a super (filled with unfin-

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A MINERAL SPRING AT YOUR DOOR.

ished sections) on several of my hives. These sections were filled with black honey, and the bees cleaned them out nicely. I used no packing over the frames, and the bees came through nicely. I wintered them out-of-doors in a winter-case, the ones I use holding 3 hives. The sides and ends are made of boards cleated together, lined with tar-paper, and can be taken down and put away for use again. There is plenty of honey below. The temperature went as low as 20 degrees below zero. Is there any harm in doing this way. F. R. BRIGGS.

ANSWERS.—1. Follow the rule that applies to giving supers to any swarm. If you give a super at once there is danger that the queen will go up and lay in it; so wait a day or more until the queen has begun laying in the brood-chamber, or else give the super at once over a queen-excluder.

2. Some prefer starters, and some say full sheets of foundation, or still better drawn combs. In my own practice I have never used shallow starters, for fear of drone-comb. But if you want to save on foundation, you will be pretty free from drone-comb by giving at first no more than four or five frames, having shallow starters in these, and then after the bees have filled these with comb fill up the hive with full sheets of foundation or drawn combs. The answer to your first question gives the answer as to super and excluder.

3. In the hundreds of combs that I have had built upon full sheets of worker foundation, I don't think I have ever seen two inches square changed into drone-cells. If from any cause small patches of drone-comb are found, cut them out and fill up the holes with patches of worker-comb.

4. Your success is good proof that the plan is all right. The only objection I think is the fear that the sections would be injured for future use. The same sections, however, might be used year after year.

* * *

Extracted Honey Production and Marketing.

1. I guess you will think I am troubling you often, but I cannot help it, can you?

2. What would be best to put my extracted honey in, a barrel or a galvanized-iron tank?

3. If I put it in a barrel or tank should I not have a faucet near the bottom to draw the honey off?

4. Would a wooden faucet be as good as a metal one in a barrel?

5. If I have a metal tank made should I have a metal cover made for it, or would a piece of cloth do in place of it to keep out the dust, etc.?

6. About 8½ cents a pound is the most I can sell comb honey for. Now, can I sell a one-quart Mason fruit-jar full of honey, jar and all, for 40 cents, and make it pay? I can get the jars for 75 cents a dozen.

7. Is a one-quart fruit-jar a good package for extracted honey?

8. Must I put a rubber around the neck of the bottle, or would it make the honey taste of the rubber?

9. What kind of a label ought to be put on the jar? Do you think one like No. 17, in A. I. Root Co's catalog of honey-labels, is a good one? I do. OREGON.

ANSWERS.—1. No, neither do I want to help it. So long as I have on hand a stock of answers from which I can select, to fit such questions as are not already answered in the text-books, I'm glad to have the questions come. When I can't find any other appropriate answers I still have a job lot of the "I don't know" brand.

2. Hard to tell. Perhaps a paraffined barrel. But if the honey doesn't stand in it a long time, there are advantages in the metal.

3. The faucet is a great convenience—almost a necessity.

4. You can have a poor one of either kind, but I suppose one of the best metal faucets is better than the best wooden one.

5. Use a circular cover of cotton sheeting, having a hem about the edge and a rubber cord through the hem.

6. With the conditions you name, you ought to make the extracted pay a good deal better than the comb.

7. Yes, one of the best; but in some markets it is too large. I may as well add that sometimes it is too small.

8. The rubber will do no harm, and it's safer to use it.

9. Yes, what you mention is good. It's all a matter of taste: find out what your customers like best.

* * *

Indication of Presence of Queen—Rape.

My colony of bees which is upstairs in the barn was unpacked March 30, and to all appearances they are very much alive, but I could not find a single sealed cell. I did not give them anything to eat that day as I should have done, and the next day when I examined them I found nearly three-quarters of them dead. I suppose they must have been just on the verge of starvation when I first opened them. I filled a couple of combs with thick sugar syrup, and a day or two ago when I looked at them there were several cells sealed. I think they contain honey. As far as I could see there was no brood or eggs. They have carried in a little pollen and some syrup I put out for them. I have looked at them several times and even among so few bees I have in no case been able to see a queen. Would the sealed cells of honey and the pollen carried in indicate the lack, or the presence, of a queen, in your estimation? and if there were a queen should there not be eggs and brood by this time? Many soft maples and elms are in bloom already.

In answer to the question about rape, on page 234, I will say that there is a Farmer's Bulletin, free for the asking, on "Rape as a Forage Crop." There are two varieties of rape—the annual, which is no good for fodder and is grown simply for the seed from which a lubricating oil is expressed; and the biennial, which is used chiefly for fodder and does not bloom till the next year after planting. As the biennial variety does not live through the winter, and the annual is not grown here, I should judge that rape would not cut a very important figure in the honey-pasturage of this section. I think if rape were sown with alsike clover it would soon smother the clover out on account of its more rapid growth. If I am not right I would gladly be corrected. MINNESOTA.

ANSWER.—The fact that you could not find a queen with only a handful of bees in the hive is not positive proof that no queen was present; neither is this casting any reproach on you as a queen-finder; many a time I have failed to find a queen in a hive with a mere handful of bees, and I don't know why. The sealed cells of pollen and honey indicate nothing one way or the other as to the presence of the queen; but the absence of brood and eggs when the bees are carrying in pollen and honey is pretty strong proof that there is no queen there.

* * *

The Premiums offered this week are well worth working for. Look at them.

FROM MANY FIELDS

Wintered Well—Large Hives.

Bees have wintered well in Ontario. I put into the cellar over 300 colonies, a few I bought only a few days before putting in, and lost 2 by starvation—one queenless, and evidently drone-layers in the comb in the fall. This was the total cellar loss. At least half of the colonies are now occupying the brood-chamber in full 12 Langstroth combs. The last shadow of doubt has passed away about large hives for me. R. F. HOLTERMANN.
Ontario, Canada, April 15.

Loss from Starvation.

It appears now as if the honey crop in this locality would be a failure. There have been no swarms and little or no surplus stored, and the bee-keepers may be thankful if their colonies do not starve during the usual drouths in May and June. It appears to me that the loss from starvation of bees in this locality is much greater than ours from freezing in the North.

There is something curious about the blossoms; my strawberries blossomed white, but did not set fruit. On examining the bloom I ascertained that they had no pistils. Another grower told me the same thing, and added that his plums were the same—bloom destitute of pistils, and set but little fruit.

Last season a prolonged drouth was followed by almost constant rain, and this may have injured the formation of buds; and this may also have something to do with the loss of honey in the wild bloom.

MRS. L. HARRISON.
Washington Co., Fla., April 26.

Grease to Prevent Propolis on Fingers.

An item lately appeared in the American Bee Journal stating that grease or butter would loosen the propolis off the hands. Why not put the grease on the hands first, and prevent the propolis sticking to them, which it does, as I know by many years experience? I carry along a little tin box with grease, and smear my finger occasionally, and have no propolis to laboriously unstick.

Lasalle Co., Ill. A. MOTTAZ.

Spring Dwindling.

It has been very bad bee-weather here in the Ottawa Valley, so far this spring. The snow went off early in March, but now we are having hard frosts every night, and cold north and east winds every day. It is snowing to-day. Most of the bee-keepers around here have had their bees out for some weeks past. Stores are generally low, and spring dwindling is going on at a rapid rate. There will be a great loss of colonies if this weather continues much longer. Mine are safe in the cellar yet. I took them out about two weeks ago and let them have a good flight on a warm afternoon, and they have been as quiet since as in January. I have 10 colonies.

W. A. HANNA.
Ontario, Canada, April 23.

North Texas Convention.

The 25th annual session of the North Texas Bee-Keepers' Association was held in Greenville, April 1, 1903. The meeting was called to order by Vice-Pres. J. M. Hagood. Prayer was offered by Rev. J. N. Hunter. But few of the leading bee-men of the Association were present. Pres. W. R. Graham has been an invalid for two years.

The usual program of apiarian topics was discussed, to-wit: "Queen-Rearing and Introducing;" "Drones, Pure or Hybrid;" "Apiarian Supplies;" "Diseases of Bees—Foul Brood, etc.;" "Strains of Bees—Hybrids,

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3—17A5t

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The following officers were elected for the ensuing year: W. R. Graham, president; J. M. Hagood, vice-president; W. H. White, 2d vice-president; Rev. W. R. Lowrey, chaplain; and Rev. J. N. Hunter, secretary, of Wylie, Tex.

The usual vote of thanks was offered to W. R. Graham & Son for their hospitable entertainment; also a tender of sympathy to our venerable president, because of his affliction.

The convention adjourned to meet at Blossom, Tex., the first Wednesday in April, 1904.

J. N. Hunter, *Sec.*

Collin Co., Tex., April 10.

Report for 1902—"Missing Link."

Eighteen colonies averaged 100 sections each. Our leader, a hybrid, put up 290 nicely finished sections; they did not appear as strong as many others that did not reach one-third as many sections.

Will those who have had colonies making very large yields please report and say what kind of management, if any, contributed to the result? In this case nothing was done excepting placing on supers and removing them about dark. A stray young queen was found in one of the supers. but was allowed to escape. I regretted her loss later. I favor absconding swarms, and always try to secure them; they seem more vigorous than others. I have five such now that I secured last fall; one of them is a 3-banded Italian, and the strongest in a lot of 35 colonies.

We favor the Danz. frames, and find single bodies large enough. I tried double-deckers, but they are failures here for comb honey. Moving supers, bees and all, to assist weak colonies did not benefit the one, but injured the other.

I want to know about that "missing link." Does it only occur in natural-swarming cells, and not in any other methods? We do not care whether it is a tube, cord, rope, or sausage-link. I merely want to know if it occurs in one case and never in the other.

Bees wintered well out-of-doors here. I got a good start during the fine March weather, but April, to this date, is cold and wet. The wind is almost constantly in the northeast.

White clover has a strong start, but Yankee weather puts a big discount on the prospects.

I had some hybrids, as well as pure Italian bees, working on red clover, and if my memory serves me rightly I saw German bees working on it in this locality 45 years ago.

Guy Hunsberger.

Northampton Co., Pa., April 6.

Cold, Wet Weather—American Hive

I can not keep bees without the American Bee Journal, for sometimes one item is worth its price for a year.

I am starting the season with 20 colonies in fair shape, but the weather has been cold, and so much rain that they could not work or build up as they should have done.

I use the American hives, and would have no other for this locality. The size of the hive is 15 inches square, brood-frames 12½x11¼ inches, one and two stories high as they are needed. They beat any hive that I ever tried for building up nucleus colonies. I hope for a good year.

F. McBride.

Hardiu Co., Ohio, April 17.

Management of Bees.

I noticed a number of inquiries about spring management of bees. I will give some of my experience dating back to 1876.

I started in with 2 colonies of bees, with the view of supplying my table with honey. I made a study of bees, with very little loss, and I soon had all I could care for. My business called for 24 hours a day—half day and half night. Along in the '80's I found I was over-taxing my strength, and I would have to

Italian Queens, Bees and Nuclei.

We have a strain of bees bred specially for honey-gathering and longevity, at the following prices:

One Untested Queen	$1.00
One Tested Queen	1.35
One Select Tested Queen	1.50
One Breeder Queen	2.50
One-Comb Nucleus (no Queen	1.40

Tested ready now; untested in May. Safe arrival guaranteed. For price on Doz. lots send for catalog. **J. L. STRONG,**
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California! If you care to know of its Fruits, Flowers, Climate or Resources, send for a sample copy of California's Favorite Paper—

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This Emerson stiff-board Binder with cloth back for the American Bee Journal we mail for but 60 cents; or we will send it with the Bee Journal for one year—both for only $1.40. It is a fine thing to preserve the copies of the Journal as fast as they are received. If you have this "Emerson" no further binding is necessary.

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$12.80 For 200 Egg INCUBATOR

Perfect in construction and action. Hatches every fertile egg. Write for catalog to-day.

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46A26t Please mention the Bee Journal.

The Danz. Hive—

The Comb Honey Hive.

We sell it. We are authorized jobbing agents for THE A. I. ROOT CO., for Michigan. Send us a list of the goods you want for this season, and let us quote you prices. Beeswax wanted. Send for catalog. **H. M. HUNT & SON,**
10A17t BELL BRANCH, MICH.

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Tennessee Queens.

Daughters of Select Imported Italian, Select long-tongued (Moore's), and Select, Straight 5-band Queens. Bred 3¼ miles apart, and mated to select drones. No bees owned within 2½ miles; none impure within 3, and but few within 5 miles. No disease. 30 years' experience. WARRANTED QUEENS, 75 cents each; TESTED, $1.50 each. Discount on large orders.

Contracts with dealers a specialty. Discount after July 1st

Send for circular.

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9A26t SPRING HILL, TENN.

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BUCKEYE INCUBATOR CO SPRINGFIELD, OHIO
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drop either the bees or my other business. I made the mistake of dropping the bees, although I put them on shares and derived some income from them, but it was not long before I had no bees.

At the time I dropped the bees I was getting about three tons of honey a year. I started with Langstroth hives, and being an admirer of Mr. Doolittle's writings, I decided to try the Gallup frame, and I was so well pleased with it that I adopted it, and I never have regretted the change. Perhaps if I had been in a warmer climate it might be different. When I became satisfied which frame I liked best, I made a part of the hives double-walled for outdoor wintering, and a part single-walled for cellar-wintering.

As soon as I got fairly started I commenced experimenting on spring management. The first warm days in March that bees could fly, and warm enough to open the hives, which is usually the first or second week of the month, I took part of them out of the cellar. I thoroughly clean the hives out and crowd the bees up so that they cover all of the combs, and see that they have sufficient feed. I use chaff division-boards, and keep them crowded so that I almost always find brood on the outside of the outside combs, and make haste slowly in spreading the combs when set out the second time.

I forgot to say that as soon as the weather turned cold again, after cleaning them out and crowding, I put them back into the cellar again, and I found by experimenting that it was best in this locality to leave them in until settled weather, avoiding dwindling.

I have taken up bees again in a small way, for it is a pleasure for me to handle them. I never could lay down any set rules to follow, but had to watch each individual colony, and try to supply their needs.

Perhaps I may some time give my experience in outdoor wintering in a cold climate.

I have always found it a benefit to treat the bees as I have stated. L. A. PENNOYER.

Blue Earth Co., Minn., April 2.

Taking Bees Out Early.

Last Thursday was the only day fit for the bees to fly since they were "cellared" last fall, and as I was very anxious to know how "the land lay" with them, I took 15 to the summer stands, returning them the next day, with the exception of 6 colonies, for which I managed to "rake up" enough material to blanket them well. I shall watch the results very carefully to determine whether the setting out and returning them was a benefit or damage, and report later if I can determine any difference. In general they were in splendid condition, save a few that were in bad shape when I put them into the cellar last fall.

We have barely seen the sun since the day following the taking out of the bees, such heavy fogs nearly all the time, and perfect torrents of rain, with lots of thunder and lightning. We also had hail to the depth of an inch on Tuesday, and some of it remaining in piles after all the rain which followed. I have heard of no serious damage on account of the storm. F. W. HALL.

Sioux Co., Iowa, March 15.

Cellar-Wintering—Basswood.

My bees have been out of the cellar about two weeks. I always take them out the first week in March, if we get a day warm enough, as I can not keep them in any longer as they get very restless, and I can not find any way to stop it. For two years I have tried A. I. Root's plan of leaving the windows and outside cellar-door open nights. Last year they wintered poorly, but this winter they have come through first-rate, and they were not in nearly as good condition when they were put into the cellar as they were the year before. They were light in both bees and honey.

Yesterday my bees were getting plenty of pollen—23 days sooner than I ever saw them get it before; to-day it is cooler, and snowing. Everything seems to indicate a good season; basswood trees did not put forth their blossoms last season, therefore we expect full bloom this season.

Mortality among the bees was not as large

Italian Queens, by Mail.
Golden and Honey Queens before July 1

	1	6	12
Untested	$1.00	$ 5.00	$ 9.00
Tested	1.25	7.00	13.00
Breeder	4 00		
2-frame Nucleus (no queen)	2.00	11.00	21.00

Add price of any Queen wanted with Nucleus.

Our bees are shipped in light shipping-cases. Purchaser pays express on Nuclei.

Safe arrival guaranteed of all stock sent out.

BATAVIA, ILL., Aug. 21, 1901.

Dear Sir:—I thought I would let you know as to results of the nucleus sent me. They were placed in 10-frame hives and now they are in fine condition. From one I removed 24 pounds of honey and had to give 6 of them more room, as they were hanging out. They have more than reached my expectations.

Yours respectfully, E. K. MEREDITH.

DAVENPORT, IOWA, Dec. 31, 1901.

Your queens are fully up to standard. The honey queen that you sent my brother takes the lead. She had a rousing colony when put up for winter. The goldens can be handled without smoke or veil. Very truly yours,
JOHN THOEMING.

Notice.—No tested stock sent out before May 15. Send money by P. O. Money Order or Express Order. **D. J. BLOCHER,**
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works so much faster, forces the liquid into every crack and destroys germs and insects which the brush would pass over. The complete machine, express prepaid for only $7.50.
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We are now booking orders for 3-frame **Nuclei of Italian Bees**, with queens, to be delivered between May 1 and May 15—first come first served. They will be shipped by express from Kankakee Co., about 50 miles south of Chicago. They are on Langstroth frames, and the number of Nuclei is limited. Prices are, f. o. b. starting point—One Nucleus, $3.00; 5 or more at one time, $2.75 each.

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65 Best Queen of Sixty-five 65

MR. ALLEY: BELLE PLAINE, MINN.

I have a queen received from you in 1900. Her bees are the best honey-gatherers of an apiary of 65 colonies in which are queens from different breeders—natural queens, as Dr. Gallup calls them. The Adel queen is the best of the lot.
C. J. OLDENBERG.

Price-List now ready. **H. ALLEY,**
16A4t Wenham, Mass.

PAGE

A Pretty Good Test!

Unroll a roll of Page Fence, and let go. See the spring in the wire roll it up again.
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G. B. LEWIS CO'S GOODS and everything necessary for handling bees. The very best of goods, and largest stock in Indiana. Low freight-rates. Catalog free.

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100 Mounted Queen-Cells and one sample of the Stanley Cell-Protector or Introducing Cage for 70 cents, postpaid.
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as expected; it seemed to take very little honey to winter them.

We have only three kinds of flowers that yield honey to any extent: Basswood takes the lead, blue thistle next, and raspberry third. We have a great many acres of buckwheat, and the bees seem to work on it quite a good deal, but the hives will get lighter all the time—very seldom that we can find enough to get a taste. As to white clover, the bees will starve to death in June with fields white with clover, in this section. About thirty years ago I lost over 30 colonies by starvation, with fields white. I don't know that I have had a taste of white clover honey in 40 years. You very seldom see a honey-bee on the blossom; if you chance to see one it will look to be about half the size of a good healthy bee, with a little bit of brown pollen on its legs. C. M. LINCOLN.

Bennington Co., Vt., March 25.

Wintered Well.

Our bees have come through the winter in very good condition, and prospects are good; but, of course, time will tell.

SANFORD HARTMAN.

Lincoln Co., Nebr., April 3.

Sort o' "Does Him Up Brown."

On page 189, there is an article that attracted my attention—"Bee-Keeping in North Ontario." I consider it a gross insult to many of our able apiarists, as Mr. Brown says if bees are properly handled foul brood and insects will not attack the colonies. How absurd, when many of the best apiarists have to fight just such things.

Mr. Brown says he has never met a man that knows how to handle bees. How sad! How lonesome Mr. Brown must be in his veritable land of milk and honey, as he terms it. I wonder where Mr. Brown got his bees, as he says no one else has anything like them.

Mr. Brown says: "As to the keeping qualities of my honey it is always as good the following June as when gathered the previous September." I wonder how long Mr. Brown has been in the bee-business, that he does not know that the quality of honey improves with age, if properly cared for. I surmise that Mr. Brown has been in the bee-business just long enough to think that all other bee-keepers are only "pebbles on the beach," while he is a towering mountain. C. H. HARLAN.

Kanabec Co., Minn., March 21.

Comments on Several Subjects.

On page 154 California says: "In lifting out a frame it tears great ugly patches in the comb." If his combs are not crooked it may be like it is here. Some of my frames have thin top-bars; the bees will sometimes build comb solid from one to the other. If the frames are spaced very closely I can hardly get one out without breaking the comb. The way I do is to take a short knife and cut the comb loose on both sides of a frame, then I have no more trouble until the next time, when I have it all to do again.

Here is a hand-shake for G. B. Williamson, page 157, about forced swarms. If it is the best way to have a good queen by letting the bees rear them at swarming-time, how are we going to get any good ones if we don't let them swarm? In fact, it would not work well here to practice the shook-swarm plan, as our best flow is too short.

I think I very nearly have some of Dr. Miller's non-swarming bees. I have one colony that I hived in 1892 that have swarmed only one year; and one hived in 1895, and one in 1896, that have not swarmed at all. They are in box-hives, too.

I read with interest all that was said in the Bee Journal last year about bees being able to hear. I think Mr. Doolittle decided the question in what he said about his bees killing a singing queen. If they can't hear how did they know she was singing?

Several have asked Dr. Miller about keeping queens a few days after receiving them through the mail. The good Doctor always says, Keep them in a warm place; but I suppose he forgets to warn them about ants. If

Standard Italian Queens
OF THE HIGHEST GRADE,

Bred in Separate yards from superior stock of Golden and Leather-colored Strains. Selected from among the best stock of Long-Tongue Clover and Honey-Queens in America. Bred by us with the greatest care for business. No disease among our bees. Our elevated country, with its pure mountain air and pure sparkling spring water furnishes the ideal place of health for bees and man. See our circular for the rest.

Queens sent out last season by us arrived in the very best shape, except a few got chilled late in the season in the North. Our Queens have gone to California, Oregon, Canada, Colorado, Cuba, New Mexico, and many of the States. We rear all queens sent out by us from the egg or just-hatched larva; in full colonies. Our method is up-to-date. If you want to know what we have, and what we can do, in the way of fine, large, prolific **QUEENS**, ond how quick we can send them, just give us a trial order.

Prices: Untested Queens, $1.00; 6 for $5.00; 12 for $9.00.

Tested, $2.00; Select, $3.00; Best, $5.00.

Full Colonies, with Tested Queen, $6.00.

3-frame Nuclei, wired Hoffman frames, no Queen, $2.00; 2-frame, no Queen, $1.50. (Add price of Queen wanted to price of Nuclei.)

Special rates on Queens by the 100. Safe arrival and satisfaction guaranteed. Shipping season begins in April. Write for circular. It is FREE. **T. S. HALL,**
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SWEET CLOVER
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We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5lb	10lb	25lb	50lb
Sweet Clover (yellow)....	$ .90	$1.70	$4.00	$7.50
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Prices subject to market changes.

Single pound 5 cents more than the 5-pound rate, and 10 cents extra for postage and sack.

Add 25 cents to your order, for cartage, if wanted by freight, or 10 cents per pound if wanted by mail.

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ROOT'S GOODS AT ROOT'S PRICES
Everything used by bee-keepers. POUDER'S HONEY-JARS. Prompt service. Low Freight Rates. NEW CATALOG FREE.
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I only want to keep one out an hour or so I get a saucer and put some water in it, then put a cup in the water and lay the cage on top. Mr. Ant can walk around and look as much as he wants to. They would make short work of a queen, bees, sugar and all, here if they had a chance.

On page 201, Arkansas wants to know if the Carniolan bees will keep wax-moths out as well as Italians. I have had only one year's experience with them, but I think he will find them as good, or better, as a good queen will keep a strong colony all the time.

I have had some bee-paralysis among my bees this spring; I never saw any of it before. I have 4 colonies that have it badly; they are part Carniolan. I do not know whether this race of bees is more subject to it or not. I would be glad if some one can tell me. I am trying the sulphur cure described by Mr. Pierce, in Gleanings. I will report my success later.

This is a rather poor country for bees at best, but I fear it is going to be worse, as the saw-mills are sawing up all the poplar timber in this part of the State. I believe that bee-keepers have a harder time trying to make an honest living than any other class of people. If there is only $1.00 for the bee-keeper and the other fellow the other one stands up and says: I am going to have 99 cents anyhow, and then we will run a foot-race for the other cent.

In some places the man who grows pears is after the bee-keeper about blight, when the truth is, I don't believe the bees have any more to do with it than they do with the planet Mars. The man who cultivates grapes says they eat the dollar out of his grapes. The alfalfa man says he will miss a whole cent if he waits a day or two to cut his hay. Now, here comes the saw-mill man in a hurry to get a cent or two out of poplar trees. The sad part of it is, the bee-keepers here think that they can kill the goose that laid the golden egg and eat her, and then have more eggs laid; but they will find out, some time.

We had a late fall, and but very few cold days all the winter. The bees began to carry in pollen and rear young brood the first part of February. We have had no really cold weather since the middle of February. March, up to this time (29th), has been real warm. I have saved all my bees so far except 6 queenless colonies.

I have had to feed only a little, but if it turns cold now I will have to feed more. If not, I think I will have swarms by April 10. The most of my colonies are very strong with bees now. The most, if not all of the box-gum bee-keepers, have lost several colonies so far.

Although I had known Messrs. Dadant, Mason, Martin and Newman a short time even in bee-literature, it made me sad to read about their deaths. We have too few such men in the world now. J. S. PATTON.

Hale Co., Ala., April 2.

CONVENTION NOTICES.

Illinois.—The spring meeting of the eastern part of the Northern Illinois Bee-Keepers' Association will be held at the residence of James Taylor, in Harlem, Winnebago Co., Ill., on Tuesday, May 19, 1903. All interested in bees are cordially invited to attend.

B. KENNEDY, *Sec.*

Catnip Seed Free!

We have some of the seed of that famous honey-producing plant—Catnip. It should be scattered in all waste-places for the bees. Price, postpaid, 15 cents per ounce; or 2 ounces mailed FREE to a regular subscriber for sending us one NEW subscriber to the Bee Journal for one year, with $1.00; or for $1.20 we will send the Bee Journal one year and 2 ounces of Catnip seed to any one.

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Golden and Leather-Colored Italian, warranted to give satisfaction—those are the kind reared by QUIRIN-THE-QUEEN-BREEDER. Our business was established in 1888. Our stock originated from the best and highest-priced long-tongued red clover breeders in the U. S. We rear as many, and perhaps more, queens than any other breeder in the North. Price of queens before July 1st: Large select, $1; six for $5; Tested Stock, $1.50; six for $8; Selected Tested, $2 each; Breeders, $4. Two-frame Nuclei (no queen) $2.50 each.

Special low price on queens in lots of 25 to 100.

All queens are mailed promptly, as we keep 300 to 500 on hand ready to mail.

We guarantee safe delivery to any State, Continental Island, or European Country. Our Circular will interest you; it's free.

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(The above ad. will appear twice per month only.) 16E13t

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40-page Catalog Free. Full information regarding Bee-Supplies of all kinds. Best in the market. Latest improvements. Danzenbaker hives kept in stock.

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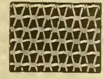

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Business Queens,

Bred from best Italian honey-gathering stock, and reared in FULL COLONIES by best known methods. Guaranteed to be good Queens and free from disease. Untested, 75c each; 6, $4.00. Tested, $1.25 each. Untested ready July 1st. Tested about July 15th. Address,

CHAS. B. ALLEN,
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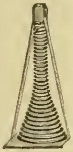

The MONETTE Queen-Clipping Device is a fine thing for use in catching and clipping Queens' wings. It is used by many bee-keepers. Full printed directions sent with each one. We mail it for 25 cents; or will send it FREE as a premium for sending us One New subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device. Address,

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Split Hickory Buggies.—The opportunity to buy the celebrated Split Hickory Buggies direct from the factory is open to our readers. The season is here for using pleasure vehicles, and the longer their purchase is postponed the less opportunity one has for getting the full benefit of the season's enjoyment out of them.

The Split Hickory line of vehicles is sold only direct to the user at the wholesale price, not being on sale at any store, nor is it handled by any jobber or dealer.

The Ohio Carriage Mfg. Co., Sta. 6, of Cincinnati, Ohio, sole makers of Split Hickory vehicles, is a highly reputable firm with a record of years of honesty and success as makers and sellers of high-class vehicles at moderate prices. Their offer to sell their jobs on 30 days' free trial is bona fide and certainly very liberal. It enables the intending purchaser to see and try just what he intends to buy. A postal card or letter addressed to them at Cincinnati will secure their valuable new catalog, containing all the latest things on four wheels, for people who like stylish, long-wearing and well-built buggies and vehicles. Send for it before you forget it.

HONEY AND BEESWAX
MARKET QUOTATIONS.

CHICAGO, April 18.—Little change from last quotation, sales are few and prices not firm. No. 1 to fancy white, 15@16c; other grades range from 10@14c. Extracted, white, 6@7c; amber, 5½@6½c. Beeswax selling on arrival at 32c. R. A. BURNETT & CO.

ALBANY, N. Y., Mar. 14. — Honey demand quiet; receipts and stock light. Comb selling, light, 15c; mixed, 14@15c; dark, 13@14c. Extracted, dark, at 7@7½c. Beeswax firm, 30@32c.
H. R. WRIGHT.

KANSAS CITY, April 20.—The supply of comb honey is about exhausted. The demand good. We quote you as follows: Fancy white comb, 24 sections, per case, $3.50; No. 1 white comb, 24 sections, $3 40; No. 2, white and amber, per case, $3.00@3.25. Extracted, white, per pound, 6@6½c; amber, 5½c. Beeswax, 25@30c.
C. C. CLEMONS & CO.

CINCINNATI, March 11—The demand for extracted honey is good at the following prices: Amber, barrels, 5½@6½c, according to quality; white clover, 8@9c. Fancy comb honey, 15½@16½c. Beeswax strong at 30c.
THE FRED W. MUTH CO.

NEW YORK, April 8.—Comb honey is moving rather slowly of late and prices are somewhat declining. We quote fancy white at from 14@15c; No. 1, white, 13c; amber, 11@12c. Extracted quiet and easy, with plenty of supply. We quote white at 6½@7c; light amber, 5½@6c; dark at 5c. Beeswax steady at 30@31.
HILDRETH & SEGELKEN.

CINCINNATI, Apr. 18—The comb honey market is a little better, as the big stock is almost exhausted; prices are better—fancy water-white brings 15@16c. The market for extracted has not changed whatever, and prices are as follows: Amber in barrels, 5¼@5½c; in cans, 6@6½c; white clover, 8@8½c. Beeswax, 28@30c.
C. H. W. WEBER.

SAN FRANCISCO, Mar. 11.—White comb honey, 12½@13½c; amber, 9@11c; dark, 7@7½c. Extracted, white, 6¾@7¼c; light amber, 5¾@6c; amber, 5@5¼c; dark, 4@4½c. Beeswax, good to choice, light, 27@29c; dark, 25@26c.

Demand is fair on local account for water-white, uncandied, but there is not much of this sort obtainable. Market for same is firm at ruling rates. Candied stock and common qualities are going at somewhat irregular and rather easy figures, holders as a rule being desirous of effecting an early clean-up.

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Nat'l Bee-Keepers' Convention at Los Angeles, Aug. 18-20

AMERICAN BEE JOURNAL

43d Year. CHICAGO, ILL., MAY 7, 1903. No. 19.

Along the "Santa Fe Route" to Los Angeles.

Upstream from "Bright Angel Point," in the Grand Canyon of the Colorado River in Arizona.

THE AMERICAN BEE JOURNAL

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EDITOR,

GEORGE W. YORK.

DEPT. EDITORS,

DR. C. C. MILLER, E. E. HASTY, EMMA M. WILSON

IMPORTANT NOTICES.

The Subscription Price of this Journal is $1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

The Wrapper-Label Date of this paper indicates the end of the month to which your subscription is paid. For instance, "dec03" on your label shows that it is paid to the end of December, 1903.

Subscription Receipts.—We do not send a receipt for money sent us to pay subscription, but change the date on your wrapper-label, which shows you that the money has been received and credited.

Advertising Rates will be given upon application.

Weekly Budget.

EDITOR ROOT is stirring up the Ohio bee-keepers to form a State organization, having for one of its objects the securing in Ohio of a good foul brood law. Success to him in his efforts.

◆

W. Z. HUTCHINSON is not practicing migratory bee-keeping, but migratory editing. His duties as State Foul Brood Inspector keep him at present wandering over the State of Michigan, and he edits the Bee-Keepers' Review as he goes, so as to give more "go" to his editorials.

◆

MRS. CHRISTIAN THEILMANN, of Wabasha Co., Minn., died April 13th, after a short illness, at the age of nearly 77 years. Her maiden name was Angola Schocke. She was born in Westphalia, Germany, June 11, 1826, and came to Minnesota in 1854. She was married to Christian Theilmann, Nov. 13, 1856. She leaves a husband, two daughters, and three sons, to mourn her departure. In a private letter Mr. Theilmann says his wife "was a true Christian, a loving mother, and a helpmate in the real sense of the word." She suffered with rheumatism more or less for the past 20 years, and was confined to her bed for over a year, when, at last, la grippe and bronchitis caused her death.

Mr. Theilmann is one of the oldest and most prominent bee-keepers in this country. He has been very successful in the business. A local newspaper item says that Mrs. Theilmann "was a faithful type of the pioneer wife and mother. She came here with her husband, both poor, but not afraid to labor with head, and heart, and hand. They prospered to a marked degree, and have been eminently successful in every undertaking, their labors being rewarded with all of this world's goods they needed, and their home blessed with a large family of children, each of whom is doing his duty in life as a good citizen." Surely, this is a good record, and the bereaved family will have the sympathy not only of the friends who knew them intimately, but also of bee-keepers everywhere, all of whom are interested in the welfare as well as the sorrows and afflictions of those engaged in the same calling.

◆

MR. THOMAS WM. COWAN made us a very pleasant call on April 29, when on his way through Chicago to England from his home in California. He seemed to be in splendid health, and looked forward with pleasure to a year and a half of travel. He has a very pleasant home at Pacific Grove, Calif., and when leaving recently the people of the town gave himself and Mrs. Cowan a farewell reception which included practically everybody that could go there. They evidently have endeared themselves to the people of that locality by their many deeds of kindness and genuine worth.

Mr. Cowan has practically retired from active work and business, and is able to devote himself to pursuits which yield no financial returns. We trust that Mr. and Mrs. Cowan will have a pleasant and safe journey, and return to their California home much benefited by their trip.

◆

"FORMALIN GAS as a Cure for Foul Brood" is the name of a small pamphlet giving the result of persistent experiments made by C. H. W. Weber with this new drug, trying to accomplish what is very much desired in the apiary—a cure for foul brood. As a result of these experiments, Mr. Weber thinks he is now permitted to say, without a doubt, that the foul brood germ can be forever eradicated by formalin gas. It has been substantiated by leading bee-keepers in his community, and bacteriologists and chemists who have recently made some very severe tests, but who all unite in saying that formalin gas does the work. The booklet describes and illustrates plainly just how to proceed (including the treatment of the afflicted colony) in exterminating foul brood without destroying hives, frames, or combs. Price, postpaid, 25 cents. It can be had from the office of the American Bee Journal.

◆

MR. J. T. CALVERT, of the A. I. Root & Co., passing through Chicago on a recent trip to the Northwest, spent an hour or so in our office. He is looking well and reports a rushing business, which latter, by the way, is what all the bee-supply manufacturers are having just now. But the prospects are that there will be a shortage in the supply of sections, as basswood timber is becoming very scarce. The probabilites are that, within a few years, it will be necessary for bee-keepers to use four-piece sections, as there is practically no other wood except basswood that makes a satisfactory one-piece section. But as the tendency seems to be toward the production of extracted honey, perhaps later on there will not be so great a demand for sections. If such should be the case, the basswood supply will likely last a few years longer than seems to be the prospect just now. Still, there are many other uses for basswood, which will help to wipe out the visible supply.

◆

DR. C. C. MILLER, whom all bee-keepers respect so highly, and many of whom know so well, called on us when in Chicago last week. With the exception of a cough, which has bothered him for a few weeks, he is in excellent health, and is able to do considerable work among the bees as well as much writing. He is one of the few remaining old-time bee-keepers, and rightly merits the title of "Father Miller." While there may be many Dr. Millers in the world, there is but one Dr. Miller known well to bee-keepers. Not only those who have a personal acquaintance with him, but all who have read his helpful writings on the subject of bees, hope that he may live yet many years to bless the world with his cheerful presence and excellent apiarian advice.

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AMERICAN
ESTABLISHT IN 1861
THE OLDEST BEE-PAPER IN AMERICA
BEE JOURNAL

43d YEAR. CHICAGO, ILL., MAY 7, 1903. No. 19.

* Editorial Comments. *

Valuable to Members of the National.—General Manager France has been sending out to each member of the Association three pamphlets. The first contains a copy of the Constitution, and a brief history of the rise and progress of bee-keepers' associations in this country. The second is entitled, "Bees and Horticulture; their Relations Mutual." In this, much valuable information is compiled regarding pollination, cross-pollination, self-sterile fruits, with testimony from various quarters of the globe, spraying fruit-trees, etc. The third gives decisions of the courts—something of intense interest to any one at all likely to have trouble with his neighbors.

Every bee-keeper in the land, not now a member, would consult his best interest by sending his dollar at once to be enrolled in the National Bee-Keepers' Association. The dollar can be sent to the office of the American Bee Journal, or to the General Manager, N. E. France, of Platteville, Wis.

A Snarl About Co-operation.—Some one objected to a national honey exchange, that in some cases a man would not want to be bound to confine his dealings within the exchange when he could do better outside. Referring to this in Gleanings in Bee-Culture, Dr. Miller said that a member of an exchange might sell outside the exchange so long as he did not cut under the exchange price. In a footnote, Editor Root replied:

> "An effective organization, National in character, should be so complete and perfect in its workings that not a single buyer can get any honey except through the accredited organization through which bee-keepers are supposed to market."

The Progressive Bee-Keeper quotes this, and says: "The editor of Gleanings most certainly knows better than that," and accuses Gleanings of being opposed to co-operation. Now, will some one tell us how the matter stands? Will the genial manager of the Colorado Exchange tell us whether a member is allowed to sell outside the exchange?

Paper for Wintering.—It may be remembered that Arthur C. Miller tried protecting hives in winter by tying tarred paper about them. He has also used newspapers in the construction of hive-covers made with thin boards, and now has gone a step farther, wintering a colony with nothing over it but burlap and paper. He writes:

> "As a test of the efficacy of paper for protection, I, last fall, in lieu of a cover, put over a moderate colony a piece of burlap, six (I think) thicknesses of newpaper and a layer of tarred paper, the latter being tacked tightly down around the sides of the hive. The burlap was to prevent the bees gnawing the paper and sticking it to the frames. The colony came through splendidly, notwithstanding several long, cold spells, and several times 14 to 20 degrees below zero. They had an entrance 14x$\frac{3}{8}$ wide open all winter."

Temperature of Bee-Cellars.—S. T. Pettit says a wise thing when he says in Gleanings in Bee-Culture:

> "I never could pronounce definitely upon the proper temperature of any given cellar without first consulting the bees in that cellar."

Cellars are not alike, hives are not alike, and thermometers especially are not alike. Find out at what temperature the bees enjoy the greatest quiet in your cellar by *your* thermometer, and then try to keep the temperature in that neighborhood.

What Kills a "Balled Queen?"—At present there is some little discussion regarding this. It seems impossible that it should be suffocation, for no matter how tightly the bees are crowded together the shape of a bee is such that plenty of passages for air will be left between the different bees. If the queen should be suffocated, there ought also to be a number of workers also suffocated at the same time, and yet when a ball of bees finally melts away from a dead queen, did you ever find a number of dead bees in the center of the cluster?

A balled queen is sometimes stung to death, but that is when the ball has been meddled with by the bee-keeper. If left to themselves, balling bees do not sting a queen, and when the central bees are held together in so tight a grip it does not seem possible that they could sting if they tried. Besides, if it was the intention of the bees to sting the queen, why should they not sting her the same as they sting a worker, without going through the preliminary work of balling her?

It seems more reasonable to believe that the balled queen is starved to death. A queen, especially when in full laying, needs a great deal of food, and can not go long without it. The balling continues for a number of hours, long enough for a queen to starve when not in a cluster, and the violent exertion that she may be supposed to make in trying to extricate herself would only hasten the starving. Does not starvation fully account for the death of the queen?

Formalin for Foul Brood.—There seems to be an interest awakened in this matter calling for light. For some reason there has obtained in this country a belief that no drug could be effectual in curing foul brood, although in Europe cures thereby have been reported for years. Now that formalin has come to the front, there seems to come along with some skepticism as to its efficiency a disposition to give it more credit than it deserves. The blunt truth may as well be told that formalin will not cure foul brood. The same means must be used that have been used without formalin, if a cure is to be effected. If formalin proves at all effectual—and there are certainly pretty strong grounds for believing that it will—the only thing it will accomplish will be to prevent the destruction of frames and combs. That of itself is a great thing.

Special apparatus is used to vaporize the drug. A dish containing the formalin is heated over a lamp, and the fumes are confined with the combs in them, much the same way as when sulphur fumes are used. It is a mistake to suppose that a comb containing healthy brood can be treated without the utter destruction of all the brood.

Experiments have shown that the fumes act with promptness and efficiency in proportion as the germs to be destroyed are near the surface—a thing naturally to be expected—and this gives room for some fear that without very long treatment there might still be left living spores at the bottom of sealed cells of honey. But let us hope for the best.

Honey for Sick Domestic Animals.—An article in Gleanings in Bee-Culture from the United States consul at Magdeburg, Germany, gives some rather remarkable cures by the use of honey. A cow with inflamed udders was cured in ten days by rubbing warm honey into the skin. A sick turkey had bits of candied honey put in its mouth, and afterward was fed pieces of brown bread dipped in fluid honey; rapid recovery followed. A sick hen with a swollen head was also cured by the administration of honey.

Phacelia is having a boom in Europe as a forage-plant. Some, however, speak disparingly of it as a forage-plant, while admitting its great value as a honey-plant. Phacelia tanacetifolia is the plant in question, and whether it is of value or not as a forage-plant, it is worth while for a bee-keeper to have a bed of it for the sake of its beautiful blue flowers. It is certainly a great favorite with the bees.

Convention Proceedings.

Chicago-Northwestern Convention.

Report of the Chicago-Northwestern Bee-Keepers' Convention, held in Chicago, Dec. 3 and 4, 1902.

BY OUR OWN SHORTHAND REPORTER.

(Continued from page 277.)

FOUL BROOD—ITS CAUSE AND CURE.

A Member—Is comb foundation made from diseased comb safe to use?

Mr. France—Yes, sir. Three years ago I experimented with 82 good colonies in 15 of the best apiaries I could find in the State of Wisconsin, where they had never seen foul brood. They took a good deal of coaxing to let me go into their apiaries, but with the confidence that I had gained with my brother and sister bee-keepers, one said, "Go ahead." I told him if there was a sign of disease I would pay him well for it. To this day they wish they had tried more of it, because those colonies experimented on were the best they had.

A Member—Would you recommend this for other people also?

Mr. France—I would in this way: That no one need be afraid of getting disease through comb foundation. Any process which will make comb foundation will kill the germs of disease in wax. I recommend the use of the foundation regardless of where it comes from.

A Member—Suppose you had diseased combs, would you melt them up and use the wax for foundation?

Mr. France—Most certainly, I would.

A Member—Would you not destroy the diseased combs?

Mr. France—No. About a year ago, in a certain apiary where there were 108 good, strong colonies of bees, I found disease in four of them, and he said he would do it. I then went on, and came back a year afterwards, and there were no live bees left, but there were 2500 combs in the cellar, all diseased. "Now, Mr. France, this is pretty hard; I am going to put a match under the whole thing and burn it up," he said. I told him not to get discouraged with that, because that beeswax, if nothing else, is worth saving; and I had him send for one of those German wax-presses to test its merits, and rather than to burn it up I ran 2000 combs through that wax-press the first day, and the balance the next day, and shipped the wax to one of our Wisconsin comb foundation men and he sent me a check for —well, for the wax, and said, "I want more."

Mr. France—If you have not got a good press you would better get a good wax-press.

A Member—What is a good one?

Mr. France—The German wax-press. That is the only one that I know of that is worth recommending at the present time, because you can do so much in such a short time with it. I have something at home that does about as well, that is, a large boiler that I had made. It holds about three barrels; put it down on a large stove and I can do about as well with it as a German press, but I can not take it with me, and this other I take free of charge, checking it as my baggage, and have melted combs here and there, and I can do it up in such a short time.

A Member—How many pounds of wax do you get out of 100 brood-frames?

Mr. France—It depends altogether on the age of those combs. One beauty of this wax-press is that you can get more wax in proportion than you can with any other. I think, on an average through our State, that we get about three or four pounds of wax to a set of 8 or 10 combs.

Dr. Miller—Mr. France, you are in a position to learn about that. I wish you would give close attention to that matter, and perhaps give us the exact figures as to the amount. I formerly had the impression that there was wax put there in the first place, and never any addition to that wax, but I find that across the ocean, by a careful examination, they tell us that there is a layer of cocoon then a fresh layer of wax, then more cocoon, then more wax. I have lived a good many years thinking that there was never any wax added. I wish you would give us the exact figures. Take some very old comb and find out the percent of wax you get from that when you have squeezed it all out; then take some newer comb, not quite so old, and give us the proportion of that.

Mr. France—I have planned to try that about the first of April. I have about 500 old black combs that I am holding for that purpose. There are some improvements to be made on the German press.

Mr. Moore—Will you tell us what is necessary to make the hives themselves safe to use again?

Mr. France—In about nine-tenths of the cases nothing; in the other tenth, if there has been any honey dropped from the diseased combs in there, or there are combs on the side of the hive, scrape them off clean. I have boiled only three lots of hives in the State of Wisconsin in the last six years. The disease would not get into the honey until it has gotten into the diseased cells.

A Member—Is it not in the bee-bread?

Mr. France—Not unless the bee-bread has been put in the cell. I do not believe the bees carry disease with them from a hive back to the flowers. When they go back from the flowers they have a new lot; that is the reason why we want to try this during the honey-flow.

A Member—If the honey from that comb which contains foul brood was put under a microscope would it indicate foul brood so that you could observe it?

Mr. France—I think it would, although the chances are it may have become dried down so that at this stage of the season it would be so hard it would take some little time, heat and moisture to show it as plainly as in June. If you have a good glass you will see that those little germs of foul brood are rod-like in shape. They are longer in proportion to their thickness, and seem to have power similar to that of a fishworm. They become large, break off and spread out. You need a very powerful glass to detect the germs of foul brood. I have to use our State glass in the Normal School.

A Member—I would like to ask if the outside of the combs of the hive that is diseased that contain nothing but honey, never having brood in, would take the disease.

Mr. France—I think not, but you would take great chances.

A Member—Is there any danger of using the tools that have been used in the handling of these bees?

Mr. France—If they have in any way become soiled or stained by the honey from the diseased hive, yes.

A Member—Can you cure a diseased hive of bees in the fall?

Mr. France—If we have plenty of sealed honey in the healthy combs.

A Member—Would you starve the bees?

Mr. France—I do not think that it would be necessary at this time of the year.

A Member—What harm would there be if you made public the names of the places and owners of diseased apiaries? Have not the bee-keepers the right to know who has it, and where it is?

Mr. France—I think you ought to know if your bees have it. Suppose some one whose bees have foul brood is a breeder of bees, and I should say in my annual report A, B and C have foul brood, would you buy bees of them? Practically I would have "cut their throat."

A Member—Would it be right for a breeder to sell such bees?

Mr. France—No, sir; and if you had legislation in the State you would stop him from doing such business.

A Member—How would you stop him if nobody knows it?

Mr. France—By inspectors going through the yards and finding it out. Some bee-keepers have asked me to go to them and give them a certificate for or against. But if you get a queen from any one abroad and you are not certain, if you will take the queen out of the cage she comes in and put her in a clean, healthy cage, I do not think there is one chance in a thousand in getting a disease. I do not think the queen herself is ever diseased enough to transmit it to a colony. It is in the food in the cage. One of our city girls, who was at the Normal School, thought that she would make a present of a box of comb honey to her mother. She sent the little box by mail; it came from the west in the mail-bag until it arrived at Madison. There it was transferred to the Northwestern train which came to my city, and right in Madison, in the making up of the mails, I received some queen-bees from a distance that I had paid a good price for. My queen-cages were thrown in the same mail-bag with this box of honey, and the surface of them was covered with honey. The postmaster said to me, "I want to show you something. Here are a whole lot of pictures and letters in the mail all botched up with honey. I am going to hold you for damages." I never before got queen-cages with the surface of the cages covered with honey. I went up and took the queens out and put them into clean cages, and put the other cages into the stove. I went down next day and paid the bill, and the postmaster said, "What do you think I found stuck in the bottom of that mail-bag? A box of honey!" Being a trapper's son, I got onto the back-track right away. I went to where the letter was addressed, and asked, "Did you get a box of honey?" She replied, "I got a letter from Annie, saying that she had sent me a box." "Where is Annie?" "Over in Minnesota." "What town is she in?" I finally got her address, and found from whom she bought the honey, and his bees had foul brood, so I took no chance on introducing the queens. There was a chance of my healthy queen-bees becoming diseased through that honey put in the mail-bag.

Dr. Miller—It is suggested here that it is barely possible that some one might misunderstand you. You have emphasized very strongly the danger of using an old cage, but you have said nothing about the bees. Would you be careful to transfer the bees with the queen?

Mr. France—It has been practiced, but those bees have fulfilled their mission for which they were sent, being good escorts of the queen. They have safely delivered their queen, and there is a great deal of danger lying in the honey-sacs of those bees, and they might as well be put into the stove with the old cage.

A Member—Is it necessary to burn anything to cure foul brood?

Mr. France—No, but it is often desirable economy.

A Member—Is there any danger of buying or using combs from strangers?

Mr. France—There have been many cases in Wisconsin where that was the means of contracting disease.

A Member—Is there any danger of buying second-hand honey-cans, barrels, or other packages, that have once had honey in them?

Mr. France—Yes; and I want to say that second-hand goods of any kind are poor things to store honey in.

A Member—Supposing the honey-comb is filled with honey, and it has had disease in it, will those disease-germs propagate themselves in the honey?

Mr. France—No, not until that honey has been transferred in the comb.

A Member—Will pickled brood or black brood produce foul brood?

Mr. France—I have never known it to do so. They are distinct and separate germs. Small-pox will not produce diphtheria or scarlet fever.

Mr. Moore—What causes foul brood in the beginning?

Mr. France—I know of a case where we have no positive proof of its being contagious. As to the real cause of what produced it I am unable to say, because in almost every case under my own observation I could trace it back to something else. I know this much, foul brood was brought here from Europe, and here from one State to another until it is a wonder to me now there is any place that is not occupied with the disease.

A Member—Is there any authentication of foul brood coming from anything but foul brood?

Mr. France—Not that I know of; and yet I say there must be a cause?

Dr. Miller—I think it is an old theory. I certainly have been one who has held to it very strenuously that without the microbe there could be no foul brood. Have you at any time understood that without the microbe there will be no foul brood?

Mr. France—No, sir.

Dr. Miller—I have held that until the last week or so. I was very much surprised to find in one of the Belgian journals that a very careful examination was made by Dr. Lambotte, who is, as I understand it, a very able bacteriologist. He went to work and examined it, and I confess to you it is very hard for me to believe there is any truth in it, and yet I believe the investigations were thoroughly made. He found that the Bacillus alvei was nothing more nor less than another microbe. The first thing he noticed was its great similarity to another rather commonly known microbe, and then he made very careful tests and decided it was exactly the same thing; that under certain circumstances this microbe, the bacillus vulgaris mesentericus, would have such changes made in it as to produce foul brood; and that it was the same bacillus under a little different condition. My own impression is that this is correct, although I don't like to believe that foul brood is in a healthy colony.

A Member—Is foul brood animal or vegetable life?

Mr. France—As far as we can decide that, we would call it vegetable in its nature, yet it has a power of motion similar to that of a worm, and in that way would much resemble life; but at the same time it is generally understood by scientists to be of vegetable matter.

Mr. France—I want you all to examine these samples of foul brood, and I want to get daylight for your inspection. Please handle these combs carefully, because you may gather the germs of disease; and when you look at them take the comb down to look into the bottom of the cell. That is the one thing I am trying to emphasize, and what we are looking for. Take it at an angle until the light strikes it just a little over the front end, when you will see that little black scale turned up in that way.

A Member—That will be to the front of the cell, won't it?

Mr. France—Yes, nearly to the front side.

(To be continued.)

Contributed Articles.

Osmosis and Atavism—"Umbilical Cord."

BY PROF. A. J. COOK.

I AM glad to respond to the Editor's suggestion called out by the inquiry of Geo. W. Adams, of Essex County, Mass., in his reference to the umbilical cord in bees. It is often strange how people are led into what seems very strange theories. Some years ago you will remember we had a great deal about the bees putting formic acid in the honey from their sting, which nonsense long ago passed into oblivion. Only a few years ago some one of apparently no mean ability thought to question the well-proved theory of Dzierzon. Now we have this theory of an umbilical cord. If I might use the expression, I should like to refer to these three as the trinity of errors. The last one seems to me strikingly without foundation. I have studied bees of all kinds in all stages, time and again, and I never saw anything that could be likened to an umbilical cord, and if I had, I should certainly have regarded that as a misnomer, for surely the developing bee has no use for any such organ. It lies immediately in its nutritious pabulum and has no need of any connection with any outside source of nutriment. Your correspondent has asked if osmosis does not fully explain the method of food-taking of the larval bees, and he might add either of worker, drone or queen. I think it is without doubt true that the bee-larva does take its food largely by this process of osmosis.

THE LAW OF OSMOSIS.

The word "osmosis" may be defined to mean the passage of a liquid or gas through an organic membrane, which membrane is made up of cells. It is one of the most important phenomena which take place in any plant or animal. The word "digestion" is often defined as liquefying the food. I would define it as rendering the food osmotic. That is, making it capable of passing through the inner part of cellular wall of the stomach into the blood. Some food that is already liquid, like serum or blood albumin, is yet non-osmotic. It can not pass from the stomach through to the blood until it is first digested. The same is true of the egg-albumin or white of an egg, and the caseine or proteid of milk. This is the substance that makes cheese. It is liquid in the milk but is yet non-osmotic and must be digested before it can pass to the blood.

Osmosis, then, is found everywhere in the body. As the nutritious material passes from the blood to the tissues, or again to the glands, it is done through osmosis. As the waste of the body leaves the tissues, or is passed off by kidneys, skin, lungs or liver, it is done through this same principle of osmosis. All work of the body is attended with this osmosis, and without it life would not continue for an instant. The air passes from the lung-cells to the blood through osmosis, and the carbon-dioxide passes off in the same way. We even take in oxygen through our skin by the same principle, and the fish and the tadpole get their air from water in the same way.

It is easy to illustrate osmosis by a very simple experiment. If we take an egg and break off a little of the shell without in the least rupturing the membrane just beneath the shell, and then place this portion of the egg in water, the water will at once begin to enter the egg through this membrane, and the elements of the egg will soon begin to pass out. That is, the cells pass these substances through them in both directions.

A better way to illustrate osmosis, or one that is more graphic, is to take a piece of stomach or bladder, and tie it over the large end of a funnel. We then fill the funnel with a saturated solution of salt, and place it in water colored with a little carmine or analine dye. At once the salt solution will pass through the membrane to the water, and the colored water will begin to pass into the funnel. The osmosis is much more rapid from water to salt than from salt to water. Indeed it is found that the rapidity of osmosis varies very much with different liquids, the kinds of membrane used, with the extent of the membrane and with temperature, heat and pressure.

In the body, then, we have everything favorable for very rapid osmosis. The membranes were developed for the absorption of the liquids which bathe them, and so are fitted for rapid work. The extent of membrane is very great. The temperature of the body is most favorable, and the pressure throughout the body stimulates the process. It is found in the experiments with the funnel that as the liquids become more uniform osmosis is less rapid. In the body the liquids are so rapidily carried away by circulation that uniformity is never approximated, and so the omosis is always great. The tapeworm, and many animals of like nature that are in the stomach or intestines of other animals, and so constantly bathed with osmotic material, are often without any stomach or alimentary canal at all. They do not have to digest their food and so need no digestive organ. All such simply absorb their nutriment from the rich digested material in which they lie. Many of our worst parasitic enemies like the porkworm or Trachina spiralis take all their food by osmosis. The latter lives in countless numbers in the muscles of man, hog, rat or mouse, and through osmosis absorbs the liquid portion of the muscle and thus snatches from their victims vitality, and very likely life. Nearly all parasites in the softer tissues take their food in this way.

We are not surprised, then, that the larvæ of bees, wasps and ants, often take their food in the same way. Their food is wholly digested for them by the nurses, and thus has only to be absorbed, and this will take place through the skin as readily as though any other membrane. As the larval bees do not need to digest their food, it having been done for them by the nurse-bees, they have no need to take it into their alimentary canal, but can the better receive it into their blood directly through the skin. As suggested, then, by your correspondent, these larval bees need no umbilical cord, or, for that matter, any alimentary canal, for they have enough in their skin to take all the needed nourishment for their devolopment.

ATAVISM.

The law of atavism refers to the inheritance of characteristics not from the immediate parents but from more distant ancestors, perhaps very distant. Thus if a child resembles its great, great, great, great, great grandparent more than any other immediate ancestors, we say such a child illustrates atavism.

No doubt Cheshire was right in the quotation, referred to by your correspondent. We know that bees were late in developing. It was long after vegetables were created before we had flowering plants. Insects appeared as early as the carboniferous period, and even earlier. But there were no flowers until the cretaceous period of the later mesozoic times. There could have been then no nectar-loving insects until after the cretaceous period, and so our bees, wasps and nectar-sipping flies, were of necessity of late development. They are not only of late development but of a higher development than most insects. We know that the larvæ of bees are practically footless, and functionally entirely so. Any foot-like appendages, then, would simply be vestigeal remains of true feet which were not only present but functionally useful in their distant relatives.

I should then have no hesitation in giving atavism as the law through which such vestigeal organs are to be accounted for. All animals show such evidence. A very remarkable one is in the gill slits of the pharnyx of our own very early embryonic development. These gill slits are what are functionally useful in fish, but in us are very temporary organs, illustrative of what were useful organs in a very distant ancestor. There are a great many evidences in our own physical make-up that illustrates this same principle. I think it was Agassiz who once formulated the law that all higher animals pass through stages in their development which are permanent in lower forms. This is only another way of stating that extreme atavism is often illustrated in all groups of organisms, both plant and animal.

Los Angeles Co., Calif.

An Experiment with Forced Swarming.

BY CHAS. W. CILLEY.

I SAW in the last Journal some questions in regard to forced swarms, and as I have had some experience in that kind of management of bees, perhaps I can write something that will help some one.

Now, I have used this plan of forced swarms for the past 4 years in my own apiary, and have not had a natural swarm during that time. I have also done lots of that kind of work for other people the past year, and it has been very satisfactory to all of them, so I think it is pretty good proof that the plan of forced swarming is all right.

I also tested the plan by putting a forced swarm by the side of a natural swarm that came out the same day the forced swarm was made, to see if there would be a difference in them in the fall, but I don't believe the best bee-keeper in the world could have told the natural from the forced swarm Oct. 1. It is a great saving of time and trouble where one has to be away from home a good deal, or has an out-apiary to look after. There are a number of ways to make forced swarms, but I will give the way that suits me best, and anyone can use it with safety:

I usually make the forced swarms about the last week in May, or the first week in June, but you cannot always go by the time of the year to divide them, but when they are strong enough in bees, or when they are about to swarm naturally, take a hive that has starters an inch or more wide in all the frames, with no supers on, and place it near the hive from which you want the forced swarm to be taken, then remove the old hive and set it back a few feet out of the way, and place the new hive on the old stand. It should be done in middle of the day, when the old bees are working in the field, then they will return to the new hive on the old stand, and you will not have to shake or brush them from the combs.

Then go to the old hive and blow in a few puffs of smoke at the bottom, raise the cover after a few minutes and blow a little smoke under, to drive the bees out of the way; then lift out the frames carefully, until you find the frame the queen is on, carry this frame, bees and all, to the new hive, lift the cover, and put the frame in the center of the hive; put on the cover, and you have the forced swarm with most of the old bees and the old queen, the same as a natural swarm, and also one frame of comb and brood, and most likely some empty cells for the queen, so she can keep right on laying.

Now quite a lot of old bees are still in the old hive, and will return to the new hive on the old stand, the first time they fly, or most of them will, so you will see the forced swarm will be about the same as a natural one.

Now you can place the hive anywhere you please, and the colony will probably not swarm that year, because so few of the old bees will be left that they will not get strong enough until the swarming season is over.

The advantage of this plan of forced swarms is in having only two good swarms, where you would get two or three, or perhaps more, if you let them swarm naturally.

Now I think I hear some one say: "What will the colony in the old hive do, as they have no queen?" If you do not divide them until they have some cells started they will soon have a queen from one of them; but if you divide them before they have cells started (queen-cells, I mean) then they will rear a queen from some of the small brood, or perhaps from eggs.

Now some will say: "I don't like queens reared that way." But I have seen as good queens reared that way as any I ever had. I have one now that will be four years old next spring, if she lives, and did fine work the past season. But queens can be reared so as to have them ready when you wish to make your forced swarms, and you can introduce one of them in the old hive, if that suits better.

I have never had a forced swarm leave or desert their hive.

Merrimack Co., N. H.

No. 2.—Queen-Rearing—Virtue Not in Cell-Cups; Only Convenience, Etc.

BY G. M. DOOLITTLE.

A CORRESPONDENT writes: "Do you claim that there is any virtue in the cell-cups you use in rearing queens, more than what there is in the cell-cups built by the bees during natural swarming or at other times when they rear queens? A neighbor tells me that all your claims are based upon the cell-cups you make. Please tell us something of this matter in the American Bee Journal."

Replying to this I would say, that some have been trying to make it appear that "Scientific Queen-Rearing" was written in the interest of "*cell-cups*," evidently desiring to divert attention from the plan as given in that book, by which thousands of bee-keepers are rearing queens of the highest order today, to where they were rearing poor or inferior queens before they came in possession of the knowledge given in the book spoken of above. If the disire was not to divert attention, no such claim could possibly be made, for there is no claim put forth for virtue being in the cell-cups, in "Scientific Queen-Rearing," other than that such cups are a convenience and a help by way of rearing queens, and in handling of the ripened product—queen-cells.

Away back in the early seventies, Elisha Gallup told the readers of the American Bee Journal that bees would store as much honey in a nail-keg or barrel, as they would in the best patent hive ever invented, or in the nicest honey-boxes ever put before the public. And no one ever attempted to contradict that statement. Surely, that nail-keg honey was just as sweet as any; none had a better flavor or gave off a nicer perfume, nor is that in section-boxes generally so well ripened or of so good a quality. What use have we then for honey-boxes, or the nice sections of the present, if no more or better honey can be obtained by their use? Why go to the expense of 20 sections and a shipping-case when one of the 20 boxes of our fathers would give as much and as good honey? I think I see a smile on many faces as they give answers by saying, "These boxes are convenient, and we use them for this very convenience;" "they enable us to put our honey on the market in an attractive and inviting shape;" "in this way we can accommodate the wants of the consuming public," etc. Just so. We use sections for the sole reason that they are a convenience for us in putting our honey on the market in the most attractive and marketable shape. They do not add to our crop one iota above what we could secure with the old boxes and barrels of the age of our forefathers.

And just so with the cell-cups. They are not for the purpose of giving us more or better queens, but for our convenience, in that they allow us to rear queens so that every maturing cell can be used in any spot and place, just as we may desire; caging the cells in cell-protectors, pushing them into the combs, put them into our inside shirt pockets to keep warm and carry to the out-apiary or elsewhere; never have two or more built together, etc.; in short, so that we can handle them as we would so many eggs which we were preparing for shipping to some distant customer, or to put under our old "hawk-colored" hen when she wanted to sit. In this way they are as much ahead of ordinary cells as section-boxes are of barrels and nail-kegs. And this convenient part pays well for the making of the cups, over any of the other plans given to the public. If it were the number of cells we could get built we could go back to the era of cutting holes in the comb, under just-hatched larvæ, for by this plan I once obtained 157 perfected queen-cells from one comb given to a queenless colony.

No, it is not the virtue in the cell-cups that gives those extra-nice queens every time, when using the plan given in "Scientific Queen-Rearing," but in the preparation of the colony so that they wish to build queen-cells when the *old queen* is present with them, the same as in natural swarming; so that they are in that normal condition under which all good queens have been reared all down through the thousands of the years which have passed since God created the honey-bee, told it to go forth and replenish the earth, and pronounced the bee, with all else He had made, as "*good*."

Cells built from strips of comb by the Alley plan, give just as good queens, where the colony building them is in the above normal condition, but the completed cells are so fragile that the greatest of care must be used in handling. If any do not wish to use a two-story hive as recommended in the book, all that is necessary to bring about the same results is to slip a queen-excluding division-board into a populous colony, treated the same way as is recommended for the two-story hive, this division-board shutting the queen away from three or four combs of brood, when queen-cells will be reared equally good as are those reared in an upper story.

Hundreds and thousands of bee-keepers have proven that the bees behind or over a queen-excluding division-board are brought under just the right conditions to rear perfect queens, as letters all over the world tell me in language similar to that of a correspondent, whose letter came by the last mail, where he says:

"The best queens that we ever had were reared in that way. The crops harvested since I used the plan as given in 'Scientific Queen-Rearing' is the evidence in the matter. It would be a waste of time for any one to tell me that my crops of honey were no better than before I used this plan, for I know better. I wish to say to you that the plan you so freely gave to the world is the very best that has yet been devised, so far as my knowledge goes, and I have read everything I can find on the subject."

I am aware that the claim is now being put forth that the presence of old bees is a detriment where queen-cells are being built, but this can be no more than a fallacious idea, as the bringing of our bees down to us through the thousands of the years of the past, in the perfect condition in which they came, abundantly proves, for till within the past half-century, 999 queens out of every 1000 were reared where the colony was in a normal condition, and no colony can be in a normal condition where no old bees are present. Old bees are a *sine qua non* (without which nothing) to successful queen-rearing, unless that *sine qua non* is supplied by the bee-keeper in the shape of heat, food, etc.; and the old or field-bees are the cheapest of anything which can be used to supply these things.

Heat and food have as much to do with successful queen-rearing as have bees of the right age, and their being brought under the right conditions, and he or she who ignores any one of these things cannot meet with the best success, or produce perfect queens. The taking of one of the elements of success, and so magnifying it that it hides all of the others—or even *one* of the essential things—is something which is often done for the time being, only to find out after a lapse of years that the thing pursued was not, after all, the *thing* over which to shout, *Eureka!*

Onondaga Co., N. Y.

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

Important Spring Work in the Apiary.

One of the very important things to see to just now is that your bees have *plenty of stores.* Stores disappear rapidly if nothing is coming in. It sometimes happens that bees may be in danger of starving with plenty of bloom, as a cold or wet spell of weather may prevent their gathering anything for several days at a time, and again it does not always yield nectar even when the weather seems to be all right. Our bees would have starved more than once in June had we not fed them, and with abundance of white clover in bloom, too. Brood-rearing must be kept up if we are to have strong colonies ready for the harvest, and that uses up large supplies of honey, so if brood-rearing is to go on without interruption the bees must have a goodly supply of honey in sight. One might think that if they have enough on hand for one day's supply that would be sufficient; but they seem to have the wisdom to look ahead and plan for the future. Keep their larder well supplied. It pays.

Another item to be looked after sharply is the queens. See to it that all your colonies have good queens. A colony with a drone-laying queen, or a queenless colony, may just as well be broken up at once, unless you have a good queen to give them, for they will surely dwindle away if left to themselves, as they are in a hopeless condition, and the bees, if used to strengthen up some other colony, may be of use.

Don't fuss too much with your bees. A pretty good plan, after you have assured yourself that they have a good queen and plenty to eat, is to tuck them up as warmly as you can and let them alone until the weather gets down to business. Yes, I know it is a big temptation to the beginner to want to see how they are progressing. You want to look them over about every day—better not. You would not enjoy being pulled out of bed in the cold, now would you?

A Bee-Keeping Sister in Texas.

My bees are in better shape than they ever were at this time of year; they are storing honey and rearing brood, and preparing to swarm. We are hoping and looking for a great honey crop in dear, old Texas this year, and I trust it will come up to our expectations. We have had so many failures.

I have received Dr. Miller's book, and must say that I am delighted with it, and think every bee keeper should have a copy. I wish to tell Dr. Miller how much I think of his book; it is a little gem, full of good things. If he has any more that he is going to put on the market I want them. I can read his book and feel as if face to face with the writer. Bless him, what a struggle he had to get his college course. How many of the young men of to-day would go through such an experience for an education? Lots of them will not embrace the opportunity when everything is paid for in advance.

I am farming on a small scale, having about two acres under cultivation. I am planting everything I can get seed for. I get up at 4 o'clock in the morning, and am out with my bees by daylight. How I love to see them at work, and the hum of the little bee is the sweetest of music to me.

I have an acquaintance in Waxahachie who has about 15 colonies of bees, and I have tried so often to get him to take some bee-paper, but he says, "My father had bees, and he never read any bee-paper, and he was a good bee-man."

I am 54 years old, and regret that so much of my life had been spent before I went into the bee-business; but I am trying to get all the pleasure out of it I can.

Ellis Co., Tex., April 6. MRS. C. R. WEST.

Glad to hear from you again, Mrs. West. I hope and trust that you will not be disappointed, and that Texas will give you a booming crop this year. I would not feel badly if Illinois would do the same.

Just talk about Southern people being lazy, will you? If they all follow Mrs. West's energetic example they surely can never be accused of laziness. Up at 4 o'clock in the morning! Mrs. West, that's too early. You don't keep that up as a steady diet, do you?

❊ The Afterthought. ❊

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, O.

DRONE-LAYING IN A QUEENLESS COLONY.

When an idea is once established it is natural (perhaps to some extent proper) that it should not disestablish itself right at the word, "Simon says, 'Thumbs down.'" Only a few years ago most of us thought that drone-laying in a queenless hive was done by one bee masquerading as a queen. Now, the opposite idea seems to be well supported—laying by many workers at once. But I see Gleanings still eats a grain of salt, to the effect that in some rare cases there may be only one. Still, I guess we should mildly repress and reprove the old language, and get rid of it in due time. Page 195.

GETTING POLLEN OUT OF COMBS.

Soak it half a day
And wash it out with spray—

To-wit, the surplus pollen encumbering combs. Presumably there would be lots of little kinks of detail to be mastered, but I guess the plan would work nicely when you got the aforesaid kinks—unless it was consolidated (as I think old pollen is very apt to be) by some organic growth working through it. As to partly damaged pollen, I guess one would have to find out for himself in each individual case whether it could be got out with spray fast enough to be practical. In time past repeated soakings and waitings in warm weather, provoking the pollen to ferment and foam itself out, have been mentioned, if I remember aright. Page 196.

UNITING A QUEENLESS COLONY WITH A WEAK ONE.

J. A. Green is a brother of the O. K. brigade, and when he says he learned long ago not to unite in spring a queenless colony with a weak colony having a queen, we wonder. He ought to tell us some more about it—as that is one of the things the books specially exhort us to do.

The observation of queenless bees that lived over winter and then on through nearly all that part of the year when life is usually short, is an interesting observation. Wonder what they did when Sept. 5 was passed—go off in a company, or go out one by one to die, or individually try to get themselves into some other colony and get killed? There is some possibility that this long life does not after all represent the extreme of which they might have been capable. Page 197.

BUYING COMB HONEY TO GET THE PURE.

So there are people who buy comb honey to be sure of getting the real thing, and then melt it up to be rid of the wax. Effective performance. More cash than faith they seem to have. Still, if I was out of the business, longed for a little liquid honey, couldn't get at an actual producer of it—I believe I'm just fussy enough to do so, too, rather than eat the running-at-large article. Page 200.

BEES DOING THE OPPOSITE OF EXPECTATIONS.

Bees always doing the opposite of what the keeper wants them to do—and that's the reason Mr. Broderick views Cuban bee-keeping as a terrible nightmare he has just escaped from. Well, our bees swarm when we don't want them to, and refuse to swarm when we do want them to—and oft omit the little matter of storing surplus, concerning which our feelings are decidedly strenuous. 'Spects the "hoss" is of the same breed as here, only the pace a little more rapid. Page 204.

BEES HANGING OUT WHILE SWARMING.

Rather queer and exceptional for bees to hang on the front of their own hive and let a swarm come out from within without joining it. Usually the swarming rush is very communicable indeed. Likely they had been right there for days, had a queen with them, and were playing that they were an out-door colony in Java—and these things may partly account for their abstention—terminated by the queen's refusing to play any longer, and going inside. Page 204.

THE AIKIN "HONEY-BOLOGNA."

Yes, we must stand by Mr. Aikin's honors in the matter of the honey-bolognas. Whenever any new thing makes a stir in the world the fellow always turns up who invented all that and more, too, long, long ago—but we'll turn him down. Of what use, pray, might a paper package of honey be in the dreamy brain of somebody? The man who works things out, and fights them out, and trots them out, he's the fellow. Presumably, hundreds of people before Fulton invented steamboats; but what good did their steamboats do? Page 211.

ALFALFA AND BEEF PER ACRE.

Aha! It's not after all the most beef per ton, but the most beef *per acre* that the farmer wants to get out of the alfalfa. Quite an important turn in our favor. When the growth is cut in the first glint of bloom a lot of the beef is left down in the bowels of the earth yet. Hay nice, but too little of it. Page 211.

Honey as a Health-Food is the name of a 16-page leaflet (3½x6 inches) which is designed to help increase the demand and sale of honey. The first part is devoted to a consideration of "Honey as Food," written by Dr. C. C. Miller. The last part contains "Honey-Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by every one who has honey for sale. It is almost certain to make good customers for honey. We know, for we are using it ourselves.

PRICES, prepaid—Sample for 2 cts.; 10 for 10 cts.; 25 for 20 cts.; 50 for 35 cts.; 100 for 65 cts.; 250 for $1.50; 500 for $2.75; 1000 for $5.00. If you wish your business card printed at the bottom of the front page, add 25 cts. to your order.

The Premiums offered this week are well worth working for. Look at them.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

Removing Drone-Comb—Uniting Queenless Colonies.

1. On page 79, of "Forty Years Among the Bees," under the head of "Mending Combs," am I to understand that all drone-combs should be removed?

2. Under the title, "Queenless Colonies," page 115, you speak of uniting a queenless colony with another. Do you accomplish that by placing the brood-chamber of the queenless colony above or below the other brood-chamber?

3. In reducing a storied colony to one story (page 130), do you take the extra brood-frames to other colonies *with the adhering bees*? Or do you brush off all the bees?

I have enjoyed reading the book, and gained much helpful information. It's valuable index makes every topic instantly accessible. It is a worthy companion to the "A B C of Bee-Culture," and with that invaluable thesaurus is kept constantly at hand. NEBRASKA.

ANSWERS.—1. Yes, when you have tried your best to keep out all drone-comb, enough will still be left to rear all drones needed. But it's a good plan to leave some drone-comb in one or more of your best colonies. It is just as important to rear best drones as to rear best queens.

2. Either way. Generally put the queenless colony above; but if the queenless colony is strong and the other weak, put the queenless colony below. It is a good plan to put newspaper or thicker paper between the two, with a hole big enough for one bee to pass at a time.

3. All bees are brushed off, leaving the colony full strength.

I thank you for your kind words.

Queen Killed—Feeding Bees.

What shall I do with one colony of bees that I have? To-day, as I was looking at my bees I saw one colony that were flying well, but were not carrying in as much pollen as they had been in the habit of doing. In front of the hive I saw a few bees, perhaps a half-dozen of them, and on looking closer I found they had their queen out there; of course she was dead. They were "lapping" her, as I call it. What shall I do with this colony? I don't want to lose them, for I have now lost half of my bees.

I have been feeding them for some time (perhaps a week) from one pint to quart of syrup, one-half sugar and the same of water. They have taken it all right until to-day (April 20); they take some, but not as much as they did.

They commenced carrying pollen about the middle of March. Why did they kill their queen?

The bees are ugly, and when I go by the hive they will fly and strike at me more than ever before. NEW HAMPSHIRE.

ANSWER.—Some accident may have happened to the queen; or she may have died of old age. It is possible a young queen is present, or they may have a queen-cell more or less advanced. In any case, if the colony is strong, give them a frame of brood, the younger the better. If they start queen-cells, they may be allowed to continue them, or you may give them a laying queen. Possibly it may be better still to unite them with a colony having a laying queen.

Sulphuric Acid for Purifying Beeswax.

What is used for purifying wax for making comb foundation? How is it applied, and in what quantities? OHIO.

ANSWER.—A large part of the impurities will be gotten out of the wax by slow cooling, or rather by keeping it hot a long time. If the melted wax is allowed to cool rapidly the impurities do not have time to settle. But foundation-makers use sulphuric acid to make a complete job of purifying, throwing a jet of steam into the wooden tank containing the wax and acidulated water. For common people like you and me, a different plan must be taken, using the acid, however, of some strength, about one part of acid to 100 of water. It may be more convenient, although more expensive, to follow G. M. Doolittle's suggestion, instead of sulphuric acid using a pint of strong vinegar in one quart of water for every ten pounds of wax.

To use the sulphuric acid on a small scale, the following directions are given in Root's A B C of Bee-keeping:

"Use a large earthenware kettle, for anything else would be apt to be affected by the acid. Into this put a small quantity of water, then a proportionate amount of acid. Allow it to come to a boil, and put in a cake of wax.

"If this is too slow and tedious a job, a large iron kettle that will hold seven or eight pails of water may be used. Fill this kettle about half full of water, slightly acidulated. Start a slow fire under it, and when the water gets to nearly boiling put in the cakes of dark-colored wax that are to be brought to a bright yellow. Keep hot for a few minutes, and then allow the fire to die down. As soon as all the particles of dirt have settled in the water, with a dipper dip off the free wax on top, being very careful not to agitate or stir up the dirt in the water.

"While the iron in the kettle may be attacked slightly, yet it will do no particular harm. When through with the kettle, clean it out with boiling water and rub it over with grease."

Keeping Queens After Hatching.

I have read a great deal about queen-rearing in bee papers and also in books, but I have never been able to understand how the queens are kept after they are hatched, where so many are reared; also by what method the queens are mated. Please give me some information on these points. MICHIGAN.

ANSWER.—There is no way to keep young queens, or to have them fertilized, except to have them kept in separate hives, or at least in separate apartments, so that there can be no communication between any two nuclei in which the queens are kept. Some queen-rearers use small hives with small frames, but the general way is to use brood-frames of the regular size, with one to three frames for each nucleus. The young queens are left to themselves to be mated, flying out of the hives when a few days old to meet the drones in the open air.

Colony with Laying Worker.

All my bees are in good shape excepting one colony; it is the same one I had so much trouble with last season and wrote about. In examining it this spring I find it is again without a queen, and laying workers are doing business, breeding is going on, and only drones are being hatched out. I never saw drones in a hive, in this part of the country, in the month of April. Eggs are attached to the sides of the cells and piled together 3 or 4 in a spot, like fly-blow.

What would I better do with this colony? Would I better try giving it a laying queen, or break it up and scatter them among the other hives? Of course I can do nothing with it until the weather becomes warmer and I have the bees put out. When would be the best time to doctor it, immediately on putting it out-of-doors, or wait till the honey-flow begins? The colony has plenty of stores. ONTARIO.

ANSWER—Those bees are old and of no value as nurse-bees, but might do a little as field-bees. The only advisable thing is to break up the colony right away, and give the bees to colonies in good working order.

Bisulphide of Carbon for Fumigating Honey—Putting on Sections.

1. Do bee-keepers use bisulphide of carbon in the place of sulphur for destroying moths in honey? If so, how is it used? and in what quantity?

2. When a swarm issues do you take the sections from the old hive and put on the new? If so, how long before you put sections on the old hive again. NEW YORK.

ANSWERS.—1. Probably most bee-keepers do not yet use bisulphide in preference to sulphur, but probably they will in the near future. Just how it is used depends upon what it is to be used upon, etc. One way is to use it upon brood-combs. Pile up several hive-bodies filled with the combs to be treated, put an empty story on top, and in this set a saucer containing two or three tablespoonfuls of the drug, and cover up close. Don't allow a light or fire to come anywhere near it unless you want an explosion.

2. Unless an excluder is used, don't put the sections on the swarm for a day or two—wait till the queen gets fairly started to laying below. Don't put sections on the mother colony till it becomes strong enough to store in the super, which may not be till next year.

Spring Management of Bees.

We have had now over a week of fine weather, though the nights are cool. The fruit-trees are in full bloom, and the bees hustling.

I have 3 colonies of bees, one of which I formed last year from a nucleus. This one is in a double-walled hive with burlap over the frames and a super filled with leaves, and cap over all. It seems to be the strongest colony now. This morning I found the bottom-board well sprinkled with wax-scales (white instead of yellow), and bees fanning about the entrance although it was quite cool. Thinking they might need room I removed the winter covering and gave them an extracting super (Ideal) with comb drawn and some honey in a few sections from last year; the most of this honey was not capped and was not candied; I kept it all winter in the attic, right up under the roof, wrapped in paper. No moth or mice disturbed them.

My question is: Did I do right to give them the super?

I did not look into the hive as it was too cold to expose the brood, this being at 6:15 a.m. I do not get a chance to examine my bees excepting on holidays, unless I do it Sundays, which I prefer not to do unless absolutely necessary, which is not the case this year. Our next holiday is May 30. I would like to know whether or not they all have brood. The queens were reared last year, all young and prolific.

It seems to me a good many useless questions are asked you by beginners, who ought to have books and papers which answer the most of their questions. This is my third year in the bee-business, but I have two papers and three text-books and will get your book this year, I hope. I can "eat" bee-lore as well as honey.

New York.

Answer.—I don't know whether it was wise or not to give the super. I could tell better by looking in the hive. The probability is that they had plenty of room without it, and that it gave them just so much more to keep warm. Still, it is possible that their combs were so filled up, and so much honey coming in, that they needed the room. Bees do not generally need surplus room till some time after fruit-bloom, but sometimes they need it during fruit-bloom.

◆

Spring Feeding of Bees—Beet or Cane Sugar.

1. In regard to an article on page 231, "Why Feed Bees Sparingly and Often," by Mr. C. P. Dadant, please tell us how to do it in this section. March and April are usually cold and windy and not warm enough for the bees to fly very much, and so they could not leave the cluster to go to the top of the hive. Would it do to open the hive to feed every day? What is the best known way to feed when the bees are out-of-doors wintering on the summer stands? How early should stimulating feeding begin?

2. I want to know if all sugar sold for granulated sugar is cane sugar or will answer for bee-feed. How can I tell cane sugar before the bees have been killed with poor or beet sugar? How can I procure cane sugar in rural sections like the hill towns of New England?

Vermont.

Answers.—1. It is impossible to give everything in one article, and however true may have been all that Mr. Dadant may have said, he would no doubt have told you that when it is too cold and windy for bees to fly the best way to feed them is not to feed at all, only to see that they have plenty of stores in the hive. When it is warm enough for profitable feeding, there will be no trouble about their leaving the cluster to take feed either above or below.

2. I think that only a small part of the granulated sugar is made from cane sugar, and although I have tried very hard to learn some way in which cane could be told from beet sugar I am still in ignorance on that point. The British Bee Journal stoutly insists that beet sugar should not be fed to bees, but authorities on this side the water insist just as strongly that there is no possible difference between beet and cane sugar when it is made into granulated sugar. Certain it is that thousands of pounds of granulated sugar made from beets have been fed with good results.

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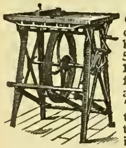

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FROM MANY FIELDS

Looks for a Good Yield.

The prospects are good for a large yield of honey in this section. White clover is in the best shape I have seen it for years, and we have lots of basswood around here.

I put 30 colonies of bees in the cellar, took out 29 on March 15; one was robbed out so I have 28 in good condition. Last year was a poor one, but I look for better results the coming summer. C. M. Lawrence.

Blackhawk Co., Iowa, April 28.

Missouri Organized.

We had a very successful convention of bee-keepers at Moberly, April 22 and 23. Several parts of the State were represented by prominent men, and we effected a permanent organization, and listened to quite a number of splendid bee-talks. We fixed the initiation fee at 60 cents for new members who may desire to join between now and our next meeting, after which time it will be $1.00. We now have 67 names enrolled. We expect to meet again some time in December, the date, place and program to be arranged by the Executive Board. W. T. Cary, *Sec.*

Carroll Co., Mo., April 25.

Smoker-Fuel—Taking Bees Out for a Flight.

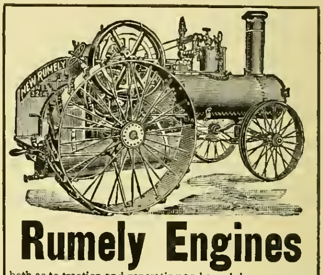
A few thoughts about smoker-fuel are suggested by reading James H. Wing's high commendations of cedar-bark as a smoker-fuel in a recent issue of the American Bee Journal. Cedar-bark for that purpose has one objection that should not be tolerated in smoker-fuel, and that is, the great amount of ashes produced from it.

I think if any one will take a given quantity of all the different kinds of smoker-fuel recommended, and burn them on a quiet day on a sheet of iron, or any other substance that will save all the ashes, each kind by itself, the conclusion will be that of all the different kinds none can approach cedar-bark as a producer of ashes.

So far as I have tested the list, apple-wood has the least ashes of any wood except pine; it holds fire well, and gives a good flow of smoke. It should be just rotten enough to break up pretty well when cut with a drawing knife.

On page 99 is a little talk about taking bees out of the cellar to give them a winter flight, and then returning them to the cellar. I wish to say that the condition of the bees, the condition of the cellar, and the kind of day, have much to do with after results.

Right here let me interject that if the bees are wintering fairly well, better not disturb them until set out to stay. If the bees are thirsty because the cellar is too dry, and if



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the day is warm, still and bright, they will carry in quite a lot of water, and no small amount of brood will result, which, I believe, is always injurious in the cellar, just in proportion to the amount started.

In the cellar, breeding is a hard pull upon the vitality of the queen, the bees and the food, without anything to show for it of value. I know, Mr. Editor, that all your readers will not agree with me in this. Let me say *that the bees that remain quiet during their stay in the cellar, without breaking cluster, and without breeding, are the ones that eat the least food and do the best work the following season.*

Let your experimenters give all the conditions.

On the same page I read about bees from time to time voiding the contents of their intestines. For many years I have held the belief that they do under favorable conditions, and, when they do, they always winter well. It is said, "Chief among these conditions are pure air and the proper temperature." Good food, should have been added.

Ontario, Canada. S. T. PETTIT.

Fair Honey Crop Expected.

The outlook for a good crop of honey has been greatly improved by the rains of April 16 and 17, which gave us a fall of an inch near the coast, and from 3 to 4 inches in the mountains.

The season is a little late, and the bees were a little weak in the early spring, owing to the short crop of last year, and in some instances scant stores, but they are building up fast, and in some localities extracting has already commenced. With a few more rains, which we expect, a fair crop will be secured in southern California. F. C. WIGGINS.

San Diego Co., Calif., April 20.

Best Prospects in Years.

It is dry here, but the best prospects for a honey crop in years, as we had rain during the winter. I had to feed my bees all winter; they are working on willow now.

S. M. WILKERSON.

Wise Co., Tex., April 23.

Bad Weather for Queen-Rearing.

April weather stopped our queen-rearing business, as for three weeks it was so cold and rained so much that we could not do anything. Bees consumed all their stores, brood was chilled and died in the nuclei and many full colonies. We had to feed sugar syrup—a thing we never did before. Yesterday was the first day in April that seemed like settled weather. To-day the wind is from the east. Bees could get some honey now, I suppose, if they could fly, though the flowers may not have any honey in them. We are trying every way possible to have queen-cells built, but our cell-cups are rejected by the bees; one or two, and sometimes four in a batch, are all we can get, and many of them are inferior. Not looking for such unfavorable weather, we were wholly unprepared for it.

Pickens Co., Ga., April 28. T. S. HALL.

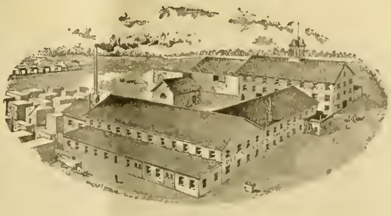
Expects a Fair Crop.

The weather is very backward for bees, but whenever it is warm enough they gather large quantities of pollen. My bees wintered fairly well, and I am consequently expecting a fair crop of honey. A. C. F. BARTZ.

Chippewa Co., Wis., April 23.

A Beginner's Experience.

April 17, 1902, I bought 7 colonies of bees and 16 empty hives. I brought them home and noticed the bees going and coming, but I did not know the reason. I soon found out that something was wrong. I got a smoker and examined them, and found what is called moth. I then sent for "A B C of Bee-Culture," and it was worth five times the price to me. I took a veil, smoker and knife and cut out the moth, and cleaned the hives nicely. The millers still came around, and I



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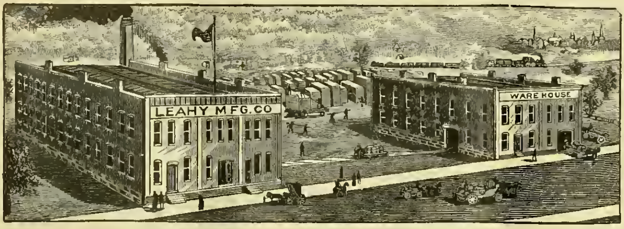

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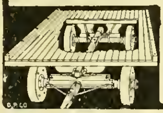

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GUS. DITTMER, Augusta, Wis.

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wanted to catch them. The black ants were very bad, so I got all the land tarpons I could find, and they crawled off; then I got hop-toads. They hopped off, but cleaned up the ants before they went. I then took a Bantam hen and chickens, and she cleaned up all pests.

This year I am going to hang a lantern over a tub of water; the miller is great for coming to the light.

I got 183 pounds of good honey and 6 swarms. I think that is doing well.

Kent Co., Md., April 13. THOS. GORE.

Foul Brood in Ontario.

EDITOR YORK:—In a recent number of the American Bee Journal I see a report as to the extermination of foul brood in Ontario. Without going into any details let me say that our good friend Mr. McEvoy is looking at things through rather rose-colored glasses. I can take him or you to more than one part of the Province where he has inspected and found foul brood, and for a whole year or more never went back to see that they were treated or cured; this does not speak well of its almost extermination. To my knowledge it is in the counties of Victoria, York, Peel, Norfolk and Simcoe; and several counties are moving to have county inspectors, so the work will be done more expeditiously.

I have been pressed to make these statements, and in justice to bee-keepers they should be made, as you have published the other side. R. F. HOLTERMANN.

Ontario, Canada, April 24.

Bees in British Columbia.

I send a few words from British Columbia, reporting the condition of my bees after a steady, cold winter, with no flight between November and March. They were wintered out-of-doors, with two or three inches of planer-shavings between the hives and an outer rough case. A gunny-sack, with planer-shavings placed in a super, formed the cushion.

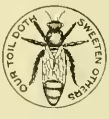
I had 5 colonies, one in a 10-frame Langstroth hive, two 8-frame Langstroths, and two Danzenbaker hives. We had a light fall of snow just before they took their flight, about the middle of March, and that cost me a lot of bees, for when they lit on this fluffy snow they sank in and soon met death in the icy meshes of that downy white mantle. Had the snow been packed the least they could have risen again, but, as it was, I lost a lot of my

Tell all Poultry Troubles
to us. Our poultry specialists will answer and advise you free of charge. We carry a
FULL LINE OF SUPPLIES
Everything the best of its kind, from markers to incubators. Our catalogue will interest and profit you. Mailed free; ask for Catalogue B.
W. J. GIBSON & CO., (Inc.) UNION STOCK YARDS, CHICAGO.
Dept. Mgr., H. M. Horton, Director Nat'l Fanciers' Association.

Please mention Bee Journal when writing.

A Celluloid Queen-Button is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-lapel. It often serves to introduce the subject of honey, and frequently leads to a sale.

NOTE.—One reader writes: "I have every reason to believe that it would be a very good idea for every bee-keeper to wear one [of the buttons] as it will cause people to ask questions about the busy bee, and many a conversation thus started would wind up with the sale of more or less honey; at any rate it would give the bee-keeper a superior opportunity to enlighten many a person in regard to honey and bees.


OUR TOIL DOTH SWEETEN OTHERS

The picture shown herewith is a reproduction of a motto queen-button that we are furnishing to bee-keepers. It has a pin on the underside to fasten it.

Price, by mail, 6 cents; two for 10 cents; or 6 for 25 cents. Send all orders to the office of the American Bee Journal.

3-Frame Nuclei For Sale

We are now booking orders for **3-frame Nuclei of Italian Bees**, with queens, to be delivered between May 15 and June 1—first come first served. They will be shipped by express from Kankakee Co.. about 50 miles south of Chicago. They are on Langstroth frames, and the number of Nuclei is limited. Prices are, f. o. b. starting point—One Nucleus, $3.00; 5 or more at one time, $2.75 each.

GEORGE W. YORK & CO.
144 & 146 Erie St., - CHICAGO, ILL.

65 Best Queen of Sixty-five 65

MR. ALLEY: BELLE PLAINE, MINN.
I have a queen received from you in 1900. Her bees are the best honey-gatherers of an apiary of 65 colonies in which are queens from different breeders—natural queens, as Dr. Gallup calls them. The Adel queen is the best of the lot.
C. J. OLDENBERG.

Price-List now ready. **H. ALLEY,**
16A4t Wenham, Mass.

Page Gate Frames

are solid round iron, welded by electricity. Gates have to stand more banging than fence. Ours are powerfully braced. Mesh entirely woven by hand.
PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.
Please mention Bee Journal when writing.

Bee = Supplies

G B. LEWIS CO'S GOODS and everything necessary for handling bees. The very best of goods, and largest stock in Indiana. Low freight-rates. Catalog free.

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SHEEP MONEY IS GOOD MONEY and easy to make if you work for us. We will start you in business and furnish the capital. Work light and easy. Send 10 cents for full line of samples and particulars.
DRAPER PUBLISHING CO., Chicago, Ills.

Wanted to Buy

unlimited quantities of ABSOLUTELY PURE **BEESWAX.** Must be nice. Best prices paid, either cash or in Supplies. Address at once,
C. M. SCOTT & CO.,
1004 E. Washington St., INDIANAPOLIS, IND.
15Atf Please mention the Bee Journal.

100 Mounted Queen-Cells and one sample of the Stanley Cell-Protector or Introducing Cage for 70 cents, postpaid.
16Atf **ARTHUR STANLEY, DIXON, ILL.**
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over the Nickel Plate Road and be convinced of its superior train service. Solid through daily express trains between Chicago, Ft. Wayne, Findlay, Fostoria, Erie, Buffalo, New York City and Boston. American Club Meals, ranging in price from 35c. to $1.00, served in Nickel Plate dining-cars; also service a la carte. Rates always the lowest. No excess fare charged on any train on the Nickel Plate Road. Chicago depot: Harrison St. and Fifth Ave. City Ticket Offices 111 Adams St. and Auditorium Annex. John Y. Calahan, General Agent, 113 Adams St., Room 298, Chicago. 'Phone Central 2057. 2—17A5t

bees that could not well be spared at that time.

In March I fed about 30 pounds of honey, which a store-keeper had allowed to become filled with flies, etc., and which was of course unsalable. I thinned it down with hot water, and the bees carried it in with avidity, and, as a result, they are well supplied with food.

Now, for the result: I went through them yesterday and found them all alive, and all have some brood. The 3 colonies in Langstroth hives are much stronger than those in Danz. hives. The 10-frame Langstroth, and one of the 8-frame, are in fine condition. The latter has two frames of brood that are a pleasure to look at. It is a large, solid patch of brood without misses.

The weaker of the Danz. hive colonies has started two queen-cells, much to my surprise. In one of the hives I found a small patch of what looked like "laying worker" brood; they looked like small rifle cartridges, with the caps of the cells bulging out. Perhaps it is drone-brood from the queen. I hope it is.

How I wish I could have the advantage of a visit from an expert like Dr. Miller or Mr. Alley, or one of the bee-kings. Being here alone I blunder along making many mistakes, and sadly feel my ignorance. I could not manage at all but for the American Bee Journal. That dollar is my best investment, and pays me the largest returns for my money. But, oh, for the living voice and experienced hand of an expert in my apiary, if only for an hour!

My hives stand on a railway embankment, consisting of boulders, so I am afraid to clip my queens, lest when they fall down they should crawl under a stone and I be unable to find them. But this is one of the things I should like to have the advice of an expert on. Mine is a very poor location, but it is that or nothing.

My bees are gathering any quantity of pollen from the pussy-willows. After that they have nothing to get until white clover, and that is the only honey harvest they will have, as our bush is all coniferæ. The gardens furnish a few flowers, but nothing worth mentioning. However, there is any amount of white clover, while it lasts. H. BEER.

British Columbia, Canada, April 22.

Prospects Good.

I am somewhat interested in bees, having 25 strong colonies. I did not lose one during the winter; they wintered in better shape than for the past six years.

We have plenty of white clover, so the prospects are good for honey this season. I notice some of the bee-keepers report the same in other localities. Well, hurrah for a change, for we have had several years that have been almost failures here.

I have taken the Bee Journal only a short time, but I think it is a fine paper, and every one who keeps bees should have it every week. L. W. ELMORE.

Jefferson Co., Iowa, April 27.

A Lecture on Ants and Bees.

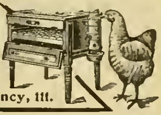
Last evening Rev. W. T. Elsing gave a lecture at the Brown Memorial Presbyterian Church; he had a good, attentive audience, and he used steriopticon pictures, which were excellent; many of them I recognized as coming from various bee books and papers. Mr. Elsing's lecture showed that he had read the proper books. He did not soar away up into flowery untruths, but gave a plain, lucid, understandable talk. His audience was charmed with the talk and illustrations. He is doing this work gratuitously as missionary work, to try to show the beautiful in Nature, and the loving kindness of God. I had never met him before, but before the lecture I formed his acquaintance, and told him about our National Bee-Keepers' Association, of which he did not know anything. I gave him the last copy of the American Bee Journal, which he was glad to receive, having never seen one. I invited him to join the National Bee-Keepers' Association, and to subscribe for the American Bee Journal. I told him about the work and objects of the National, and told him about the standing offer of $1,000 for manufactured comb honey, and several other points. He announced them all

Tennessee Queens.

Daughters of Select Imported Italian, Select long-tongued (Moore's), and Select, Straight 5-band Queens. Bred 3¼ miles apart, and mated to select drones. No bees owned within 2½ miles; none impure within 3, and but few within 5 miles. No disease. 30 years' experience. WARRANTED QUEENS, 75 cents each; TESTED, $1.50 each. Discount on large orders.
Contracts with dealers a specialty. Discount after July 1st
Send for circular.
JOHN M. DAVIS,
9A26t SPRING HILL, TENN.
Please mention Bee Journal when writing.

The Danz. Hive—
The Comb Honey Hive.

We sell it. We are authorized jobbing agents for **THE A. I. ROOT CO., for Michigan.** Send us a list of the goods you want for this season, and let us quote you prices. Beeswax wanted. Send for catalog. **H. M. HUNT & SON,**
10A17t **BELL BRANCH, MICH.**
Please mention Bee Journal when writing.



$12.80 For 200 Egg INCUBATOR
Perfect in construction and action. Hatches every fertile egg. Write for catalog to-day.
GEO. H. STAHL, Quincy, Ill.
46A26t Please mention the Bee Journal.

Italian Queens, by Mail.
Golden and Honey Queens before July 1

	1	6	12
Untested	$1.00	$ 5.00	$ 9.00
Tested	1.25	7.00	13.00
Breeder	4 00		
2-frame Nucleus (no queen)	2.00	11.00	21.00

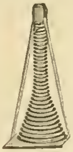
Add price of any Queen wanted with Nucleus.
Our bees are shipped in light shipping-cases. Purchaser pays express on Nuclei.
Safe arrival guaranteed of all stock sent out.

BATAVIA, ILL., Aug. 21, 1901.
Dear Sir:—I thought I would let you know as to results of the nucleus sent me. They were placed in 10-frame hives and now they are in fine condition. From one I removed 24 pounds of honey and had to give 6 of them more room, as they were hanging out. They have more than reached my expectations.
Yours respectfully, E. K. MEREDITH.

DAVENPORT, IOWA, Dec. 31, 1901.
Your queens are fully up to standard. The honey queen that you sent my brother takes the lead. She had a rousing colony when put up for winter. The goldens can be handled without smoke or veil. Very truly yours,
JOHN THOEMING.

Notice.—No tested stock sent out before May 15. Send money by P. O. Money Order or Express Order. **D. J. BLOCHER,**
17Atf PEARL CITY, ILL.
Please mention Bee Journal when writing.

Queen-Clipping Device Free!



The MONETTE Queen-Clipping Device is a fine thing for use in catching and clipping Queens' wings. It is used by many bee-keepers. Full printed directions sent with each one. We mail it for 25 cents; or will send it **FREE** as a premium for sending us **One New** subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device. Address,
GEORGE W. YORK & CO.,
144 & 146 E. Erie St., - CHICAGO, ILL.

Please mention Bee Journal when writing Advertisers.

SWEET CLOVER

And Several Other Clover Seeds.

We have made arrangementa ao that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5lb	10lb	25lb	50lb
Sweet Clover (yellow)....	$ .90	$1.70	$4.00	$7.50
Alsike Clover	1.00	1.80	4.25	8.00
White Clover	1.50	2 80	6.50	12.50
Alfalfa Clover	1.00	1.80	4.25	8 00

Prices subject to market changes.

Single pound 5 cents more than the 5-pound rate, and 10 cents extra for postage and sack.

Add 25 cents to your order, for cartage, if wanted by freight, or 10 cents per pound if wanted by mail.

GEORGE W. YORK & CO.
144 & 146 Erie Street, - CHICAGO, ILL

SPRAYING Our line of sprayers and appliances fits every man's needs. **Hand, Knapsack, Bucket, Field, Barrel, and Power** sprayers, twenty styles. Best nozzles made, attachments, formulas, etc. Select the useful and reliable. Catalog free

THE DEMING CO., Salem, Ohio.
Western agents, Henion & Hubbell, Chicago, Ill.

Business Queens,

Bred from best Italian honey-gathering stock, and reared in FULL COLONIES by best known methods. Guaranteed to be good Queens and free from disease. Untested, 75c each; 6, $4.00. Tested, $1.25 each. Untested ready July 1st. Tested about July 15th. Address,

CHAS. B. ALLEN,
18Atf Central Square, Oswego Co., N. Y.

California! It you care to know of its Fruits, Flowers, Climate or Resources, send for a sample copy of California's Favorite Paper—

The Pacific Rural Press,

The leading Horticultural and Agricultural paper of the Pacific Coast. Published weekly, handsomely illustrated, $2.00 per annum. Sample copy free.

PACIFIC RURAL PRESS,
330 Market Street, - SAN FRANCISCO, CAL.

Italian Queens, Bees and Nuclei.

We have a strain of bees bred specially for honey-gathering and longevity, at the following prices:

One Untested Queen...	$1.00
One Tested Queen	1.35
One Select Tested Queen.	1.50
One Breeder Queen	2.50
One-Comb Nucleus (no Queen	1.40

Tested ready now; untested in May. Safe arrival guaranteed. For price on Doz. lots send for catalog. **J. L. STRONG,**
16Atf 204 E. Logan St., CLARINDA, IOWA.

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Found at Last!

A place where I am rearing QUEENS for Business, Gentleness, Beauty, and For Sale. Prices:

Untested, each, 75c; doz. $7.50
Tested, each, $1.00; doz., $10.

Either Golden or leather-colored strains warranted pure.

Remit by Postal Money Orders. **DANIEL WURTH,**
Queen Specialist,
17D4t KARNES CITY, Karnes Co., TEXAS.

BIG BARGAINS IN BUGGIES

$27.50 is all that you have to pay for one of our full-rigged Top Buggies. Oil tempered springs; fine finish; worth double the price. We make harness too. Write for Catalog and liberal agency plan. Write for Catalog

ECONOMY BUGGY CO.,
Box A 53 Cincinnati, Ohio.
9D6t Please mention the Bee Journal.

HIGH CARBON COILED SPRING STEEL WIRE CATALOGUE FREE. **FENCE** INDIANA STEEL & WIRE CO. BOX 529, MUNCIE, INDIANA.
5Dtf Please mention the Bee Journal.

Having had 5 years' experience in **Rearing Queens** and having a breeding queen that is two years old, whose bees are so gentle they can be handled most of the time without smoke, besides being the greatest honey-gatherers I ever saw, I have decided to offer her daughters during the season of 1903 at the following prices. Terms cash:

Reared by Doolittle Method.

Untested Queen, 75c; 6 for..................	$4.00
Tested Queen, $1.00; 6 for..................	5.00

Natural Swarming and Supersedure.

Untested Queen, $1.25; 6 for	6.00
Tested Queen, $1.75; 6 for..................	9.00

CHESLEY PRESSWOOD, McDONALD, TENN.
13D4t Please mention the Bee Journal.

BEE-SUPPLIES!
ROOT'S GOODS AT ROOT'S PRICES

Everything used by bee-keepers. POUDER'S HONEY-JARS. Prompt service. Low Freight Rates. NEW CATALOG FREE.

WALTER S. POUDER.
512 MASS. AVE. — INDIANAPOLIS, IND.

For Sale 10 colonies Italian Bees in good condition in dovetailed hives—painted; Hoffman frames. Price, $3.50 for 8 frame, and $4.00 for 10-frame. **F. V. DAVIS,**
19A1t 424 River St., Manistee, Mich.

in his lecture, and most positively asserted that the people need never be afraid of purchasing comb honey; and also emphatically denied that the bees injured perfect fruit, but that other insects did, and that the bee naturally sucked the juice from the inviting hole.

This man is trying to lead the people aright, just on the subject of ants and bees.

CHAS. E. KEMP.

Baltimore Co., Md., April 23.

Too Cool for Bees.

As it is too cool to-day for me to be out I will write about my bees. They came through the first part of the winter in very good condition, and were breeding up very fast, but now, April 23, it is unusually cold, and I cannot say how they will do. I hope it will turn warm soon. There are thousands of bloom out now, but so cold that the bees cannot fly.

A. J. MCBRIDE.

Wautauga Co., N. C., April 24.

Spring Robbing Among Bees.

I see that some one in Pennsylvania has trouble with his bees robbing back and forth in the spring. Now, it is a common thing, where bees are wintered in a cellar, and all come out with nearly the same scent, for some of them to get to plundering from each other, and keep it up until some of them are entirely used up. I am surprised that Dr. Miller, with his 40 years among the bees, has never had a case.

The surest remedy I have ever found is to feed each colony so engaged a quart or so of feed scented with something that will give each colony a different scent. To No. 1 I give feed scented with peppermint; to No. 2 wintergreen, and so on until all that are engaged in plundering carry a different scent. A few slices of onion put into one hive will fix that colony so they will meet with a warm reception wherever they go. Essences of all kinds are better than the oils, as the oils will not mix with the feed as well as essences.

I use quart fruit-jars, and put the feed in at night when all are at home. Use an extension-bit to make a hole in the top board, and set the bit so it will cut the hole just large enough to receive the mouth of the jar. Fill the jars full, then tie over a single thickness of cheese-cloth. Have the feed rather thin, so the bees can get it readily, turn the jars over with a quick motion, and it will not run out any faster than the bees draw it out through the cloth. The hole in the top-board should be directly over the bees, so that the feed is right with the bees where they can work at it at night and day as long as it lasts. The cap of the hive should be put over the jar when on, so that no bees can get a taste of the feed from the outside. Use enough of the scenting material to give the feed a perceptible flavor of the different kinds which you use, and that kind of plundering will soon cease after they get the feed.

The bees are in fine shape here, but the weather is cold; there is scarcely a day when they can fly with safety.

IRA BARBER.

St. Lawrence Co., N. Y., April 20.

An Experience with Bees.

In the spring of 1901 I bought 2 colonies of bees in old-fashioned shallow hives, having room in each super for 40 sections. They cast 6 swarms. I kept 4 and gave away 2. I got 200 pounds of honey in the fall. The 6 colonies came through the winter all right, being buried in straw, all save the entrance or south side. They cast only 7 swarms last year, the most of them very late, as I will more fully explain later. I kept 5 and gave away 2. I got only about 40 pounds of honey from the 11 colonies, for, as all know, last year was a very poor honey-yielder.

Having put the 5 new swarms in 8-frame dovetailed hives, and being desirous of having my little apiary uniform, I sold all of my old-fashioned hives, keeping only the 5 new ones. I bought 4 more colonies, from a neighbor, that had come off very late, and were put in the 8-frame hives, so if you are keeping up with me you will see that in the fall of 1902 I had 9 colonies of bees in 8-frame hives.

Complete Line of Lewis' Matchless Dovetail Hives and Supplies at Factory Prices.

HIGH-CLASS QUEENS.—Buckeye Strain Red Clover Queens, they roll in the honey while the ordinary starve.

Muth Strain Golden Italians, None Superior. **Carniolans,** None Better.

We guarantee safe arrival by return mail.

APRIL, MAY, JUNE.

Untested	$1.00 each;	6 for $ 5.00
Select Untested	1.25 each;	6 for 6.00
Tested............	2 00 each;	6 for 10.00
Select Tested	3.00 each;	6 for 15.00

Best money can buy	$5.00 each.
2-frame Nuclei with Select Untested Queen	$2.75

Send for Catalog and see SPECIAL INDUCEMENTS.

THE FRED W. MUTH CO. Front & Walnut Sts., CINCINNATI, OHIO.

Please mention Bee Journal when writing

I have said all this to get to a place where I can relate what to me is the most interesting part of my experience, viz.:

August 9, 1902, I hived a large swarm of bees in one of the above hives; it was raining almost daily, and was cool. Knowing there had been no nectar in the bloom all summer, even if the bees could have flown, I reasoned that they could gather nothing since it had been so cold and wet. I concluded I would better look at them. Aug. 16, 1902, seven days after I had put them in the hive, was a nice, warm, sunshiny day, and although I had never done anything of the kind, I determined to look into them, especially as the bees were flying lustily from the other hives, and not a bee coming out of this one. I put on veil and gloves and removed the top from this hive, and there the bees were in a bunch, dispirited, lifeless, and seemingly in a starving condition. I grew bolder and lifted out all the frames. There was not a scintilla of comb made; I was at a loss as to what to do. I could not bear the idea of their starving, so I put on an empty super, and placed in it a pie-pan, laid some cobs in it, and filled with syrup. I made the syrup by filling a gallon bottle with granulated sugar and pouring in cold water and shaking until all was dissolved. The bees were ravenous, and soon emptied it. I continued to fill the pie-pan with sugar syrup for some days.

All of this time it was raining, when I thought I would see if they were simply eating syrup or were building comb. I again lifted the frames and found they were rapidly filling them with the most beautiful white comb. Matters were now becoming decidedly interesting to me, and knowing all my other new colonies were in almost as bad a condition, I placed empty supers on them, with pie-pans in the supers, and fed all until I had fed $15 worth of sugar to the 9 colonies. As 7 of them had to make their comb out of sugar, is it at all surprising they consumed 45 gallons of syrup, or 3 gallons for every dollar's worth of sugar?

Now, what of the result? About the middle of March I noticed an enormous amount of a wet, black stinking mass on the bottom-board under the frames. So I determined to look into them, expecting to find my late swarms, sugar-fed, all dead. To do this I had to remove the straw from the top, and got a man to lift the hive while I pulled out the bottom from under each, and scraped off this mass, in some one inch thick and very foul. I turned over each bottom-board, and this gave them a nice, clean bottom. I did not put the straw back on top, but left it banked up north of them. In a few days I lifted up some frames and found quite an amount of brood. In a short time I removed the straw from the north of them, and the next night we had a pretty hard freeze. Did it kill the brood?

Some of the colonies, especially the one coming off Aug. 9, 1902, are full of bees. Did they develop last fall? or are they the old bees that I put in there? The four colonies I bought I did not get until late in the fall; they were empty and starving. I fed them until cold weather. Surely, they could not have developed young bees last fall or during the winter, so the bees there now must be the ones put in last fall. All 9 colonies came through, but one was so weak the others pounced upon it when I was gone one day, completely annihilating it. They punctured the comb and tore it up in a great way.

I may add that I immediately subscribed for the American Bee Journal on buying my first 2 colonies. I have since bought Prof. Cook's "Manual of the Apiary." I am too busy with my profession to read much bee-literature, but it is getting "mighty interesting." W. A. WISEMAN, M. D.

Douglas Co., Ill., April 13.

[The freeze may and may not have killed the brood.

The bees present in the middle of March were mostly those reared after the swarm was hived Aug. 9, and the bees in the other colonies were, as you surmise, reared before winter. Generally no young bees leave the cells after October.—EDITOR.]

CONVENTION NOTICE.

Illinois.—The spring meeting of the eastern part of the Northern Illinois Bee-Keepers' Association will be held at the residence of James Taylor, in Harlem, Winnebago Co., Ill., on Tuesday, May 19, 1903. All interested in bees are cordially invited to attend.

B. KENNEDY, *Sec.*

A Good Poultry Supply House.—A new advertisement of an old reliable poultry supply house comes into our columns this issue. It is that of W. J. Gibson & Co., of Chicago. Many of our readers have had satisfactory dealings with these people for years. There is hardly any necessity of the poultry business but what is carried by this concern, who make it a point to supply to their customers the best, and only the best, there is going. In the personnel of the house there is a good deal of poultry talent, certain of the members being actively engaged in the poultry business. At least one, Mr. H. M. Horton, is well known to poultrymen, and is at present a director in the National Fanciers' Association. Naturally, they know what the poultryman's needs are, and what is best adapted to meet them. In the interest or our readers we heartily commend the advertisement to their notice. Please mention the American Bee Journal when writing to them.

The Nickel Plate Road

is the short line to the East. and the service equal to the best. You will save time and money by traveling over this line. It has three through daily express trains, with through vestibuled sleeping-cars, and American Club Meals, ranging in price from 35c. to $1.00, are served in Nickel Plate dining-cars; also a la carte service. Try a trip over the Nickel Plate Road, and you will find the service equal to any between Chicago and the East. Chicago depot: Harrison St. and Fifth Ave. City Ticket Offices 111 Adams St. and Auditorium Annex. John Y. Calahan, General Agent, 113 Adams St., Room 298, Chicago. 'Phone Central 2057. 1—17A5t

Catnip Seed Free!

We have some of the seed of that famous honey-producing plant—Catnip. It should be scattered in all waste-places for the bees. Price, postpaid, 15 cents per ounce; or 2 ounces mailed FREE to a regular subscriber for sending us one NEW subscriber to the Bee Journal for one year, with $1.00; or for $1.20 we will send the Bee Journal one year and 2 ounces of Catnip seed to any one.

GEORGE W. YORK & CO.
144 & 146 E. Erie St., - CHICAGO, ILL.

Mount Union College

Open to both sexes from the beginning. Founded in 1846. Highest grade scholarship. First-class reputation. 25 instructors. Alumni and students occupying highest positions in Church and State. Expenses lower than other colleges of equal grade. Any young person with tact and energy can have an education. We invite correspondence. Send for catalog.

MOUNT UNION COLLEGE,
Alliance, Ohio.

Please mention Bee Journal when writing advertisers.

HONEY AND BEESWAX
MARKET QUOTATIONS.

CHICAGO, April 18.—Little change from last quotation, sales are few and prices not firm. No. 1 to fancy white, 15@16c; other grades range from 10@14c. Extracted, white, 6@7c; amber, 5½@6½c. Beeswax selling on arrival at 32c. R. A. BURNETT & CO.

ALBANY, N. Y., Mar. 14. — Honey demand quiet; receipts and stock light. Comb selling, light, 15c; mixed, 14@15c; dark, 13@14c. Extracted, dark, at 7@7½c. Beeswax firm, 30@32c. H. R. WRIGHT.

KANSAS CITY, April 20.—The supply of comb honey is about exhausted. The demand good. We quote you as follows: Fancy white comb, 24 sections, per case, $3.50; No. 1 white comb, 24 sections, $3 40; No. 2, white and amber, per case, $3.00@3.25. Extracted, white. per pound, 6@6½c; amber, 5½c. Beeswax, 25@30c. C. C. CLEMONS & CO.

CINCINNATI, Apr. 27.—Little demand for comb honey at present: fancy white sells at 15@16c in a small way. We quote amber extracted at 5½@6½c; white clover, 8@9c. Sales not as lively as expected this season of year. Cuban extracted is offered on all sides, and future prices are awaited with intense interest. Beeswax strong at 30c. THE FRED W. MUTH CO.

NEW YORK, April 8.—Comb honey is moving rather slowly of late and prices are somewhat declining. We quote fancy white at from 14@15c; No. 1, white, 13c; amber, 11@12c. Extracted quiet and easy. with plenty of supply. We quote white at 6½@7c; light amber, 5½@6c; dark at 5c. Beeswax steady at 30@31. HILDRETH & SEGELKEN.

CINCINNATI, Apr. 18—The comb honey market is a little better, as the big stock is almost exhausted; prices are better—fancy water-white brings 15@16c. The market for extracted has not changed whatever, and prices are as follows: Amber in barrels, 5¼@5½c; in cans, 6@6½c; white clover, 8@8½c. Beeswax. 28@30c. C. H. W. WEBER.

SAN FRANCISCO, Mar. 11.—White comb honey, 12½@13½c; amber, 9@11c; dark, 7@7½c. Extracted, white, 6¾@7¼c; light amber, 5¾@6c; amber, 5@5¼c: dark. 4@4½c. Beeswax, good to choice, light. 27@29c; dark, 25@26c.

Demand is fair on local account for water-white, uncandied, but there is not much of this sort obtainable. Market for same is firm at ruling rates. Candied stock and common qualities are going at somewhat irregular and rather easy figures, holders as a rule being desirous of effecting an early clean-up.

WANTED WHITE CLOVER EXTRACTED HONEY!
Send sample and best price delivered here; also Fancy Comb wanted in no-drip cases.
THE FRED W. MUTH CO.
32Atf Front and Walnut, CINCINNATI, OHIO.
Please mention Bee Journal when writing.

If you want the Bee-Book
That covers the whole Apicultural Field more completely than any other published,
send $1.20 to
Prof. A. J. Cook, Claremont, Cal.,
—FOR HIS—
"Bee-Keeper's Guide."
Liberal Discounts to the Trade.

FREE FOR A MONTH ....
If you are interested in Sheep in any way you cannot afford to be without the best Sheep Paper published in the United States.
Wool Markets and Sheep
has a hobby which is the sheep-breeder and his industry, first, foremost and all the time. Are you interested? Write to-day.
WOOL MARKETS AND SHEEP, CHICAGO. ILL.
Please mention Bee Journal when writing.

DAIRYMEN ARE DELIGHTED
to meet those who work for us. Cow keepers always have money. We start you in business. You make large profits. Easy work. We furnish capital. Send 10 cents for full line of samples and particulars.
DRAPER PUBLISHING CO., Chicago, Ills.
Please mention Bee Journal when writing.

The Best Bee-Goods in the World....

are no better than those we make, and the chances are that they are not so good. If you buy of us **you will not be disappointed. We are undersold by no one.** Send for new catalog and price-list and free copy of THE AMERICAN BEE-KEEPER; in its thirteenth year; 50 cents a year; especially for beginners.

—THE—
W. T. Falconer Mfg. Co.,
JAMESTOWN, N. Y.

W. M. GERRISH, Epping, N.H., carries a full line of our goods at catalog prices. Order of him and save the freight.

A Few Cheap Smokers !

We find we have on hand a few slightly damaged Clark and Bingham Bee-Smokers, which got a little damp and soiled at the time of the fire in the building where we were about 2 years ago. They are all almost as good as new.

We have some of the Clark Cold Blast, which when new sell now at 55 cents each; some of the Large Bingham—new at 65 cents each; and some of the Little Wonder Bingham—new at 50 cents. But to close out those we have left that are slightly damaged, we will fill orders as long as they last at these prices:

Clark at 25 cents each; Little Wonder Bingham at 30 cents each; and Large Bingham at 40 cents each.

We do not mail any of these slightly damaged Smokers, but will put them in with other goods when ordered, or sell them here at our office when called for—at the above prices.

GEORGE W. YORK & CO.,
144 & 146 E. Erie Street. - CHICAGO, ILL.

Bee-Keepers, Remember

that the freight rates from Toledo are the lowest ot any city in the U.S. We sell

Root's Supplies at their Factory Prices * * * * *

Poultry Supplies and Hardware Implements a specialty. Send for our free Illustrated Catalog. Honey and Beeswax wanted.

GRIGGS BROS.,
214 Jackson Avenue,
TOLEDO, OHIO.

14A13t Please mention the Bee Journal.

$300,000,000.00 A YEAR and you may have part of it if you work for us. Uncle Sam's poultry product pays that sum. Send 10c for samples and particulars. We furnish capital to start you in business. **Draper Publishing Co.,Chicago,Ill.**

Special Notice to Bee-Keepers !

BOSTON

Money in Bees for You.
Catalog Price on

ROOT'S SUPPLIES

Catalog for the Asking.

F. H. FARMER,
182 Friend Street, Boston, Mass.
Up First Flight.

16A13t Please mention the Bee Journal.

26th Year **Dadant's Foundation** 26th Year

We guarantee Satisfaction. What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS. PATENT WEED-PROCESS SHEETING.

Why does it sell so well? Because it has always given better satisfaction than any other. Because in 25 years there have not been any complaints, but thousands of compliments.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

Bee-Keepers' Supplies OF ALL KINDS *****

Very fine pure-bred **BARRED PLYMOUTH ROCK** Chickens and Eggs for sale **at very low prices.**

Langstroth on the Honey-Bee—Revised,
The classic in Bee-Culture—Price, $1.20, by mail.

BEESWAX WANTED at all times.

DADANT & SON,
Hamilton, Hancock Co., Ill

WAX PROFITS.

Many bee-keepers allow old combs and scraps of beeswax to collect, which, for lack of time and the proper utensils, is scattered or eaten up by moth-worms. A big item would be added to the year's profits by the timely rendering of said wax by an economical process. We believe the press illustrated herewith fills a long-felt want in rendering wax.

B. Walker, Clyde, Ill., says:

"Was inclined to believe at first that the German wax-press was a failure; but after a thorough trial was well pleased. I secured 30 pounds more wax from one day's use of the machine than I would have secured by the ordinary method of rendering."

N. E. France, of Platteville, Wisconsin, State Inspector of Apiaries, and Gen. Mgr. National Bee-Keepers' Association—says:

"The German wax-press is by far the best machine or process to save wax from old, black brood-combs."

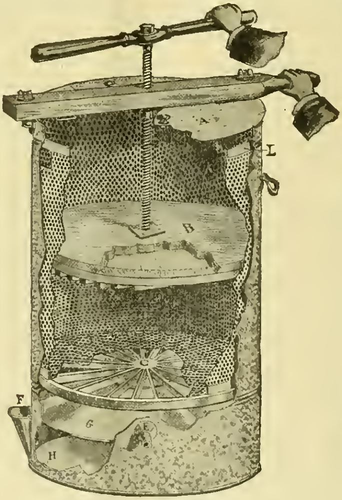


Fig. 169.—The Root-German Steam Wax-Press. Price, $14. Shipping weight, 70 lbs.

Manufactured —by— **THE A. I. ROOT CO., Medina, Ohio, U.S.A.**
BEESWAX WANTED.

GEORGE W. YORK & CO. 144 & 146 Erie Street, CHICAGO ILL., are headquarters for ROOT'S BEE-KEEPERS' SUPPLIES IN CHICAGO. Send to them for their free Catalog.

Nat'l Bee-Keepers' Convention at Los Angeles, Aug. 18-20

AMERICAN BEE JOURNAL

43d Year. CHICAGO, ILL., MAY 14, 1903. No. 20.

APIARY OF A. J. KILGORE, OF WOOD CO., OHIO.
(See page 308.)

THE AMERICAN BEE JOURNAL

PUBLISHED WEEKLY BY

GEORGE W. YORK & COMPANY

144 & 146 E. Erie St., Chicago, Ill.

Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

EDITOR,
GEORGE W. YORK.

DEPT. EDITORS,
Dr. C. C. Miller, E. E. Hasty, Emma M. Wilson

IMPORTANT NOTICES.

The Subscription Price of this Journal is $1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

The Wrapper-Label Date of this paper indicates the end of the month to which your subscription is paid. For instance, "dec03" on your label shows that it is paid to the end of December, 1903.

Subscription Receipts.—We do not send a receipt for money sent us to pay subscription, but change the date on your wrapper-label, which shows you that the money has been received and credited.

Advertising Rates will be given upon application.

A New Bee-Keeper's Song—

"Buckwheat Cakes and Honey"

Words by EUGENE SECOR.
Music by GEORGE W. YORK.

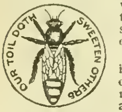
This song was written specially for the Buffalo convention, and was sung there. It is written for organ or piano, as have been all the songs written for bee-keepers. Every home should have a copy of it, as well as a copy of

"THE HUM OF THE BEES in the APPLE-TREE BLOOM"

Written by
Eugene Secor and Dr. C. C. Miller.

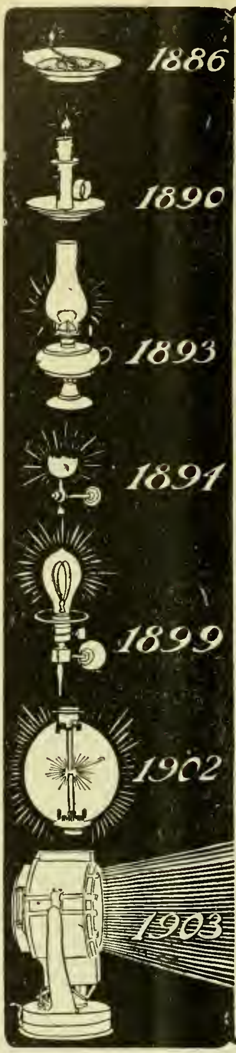
Prices—Either song will be mailed for 10 cents (stamps or silver), or both for only 15 cents. Or, for $1.00 *strictly in advance* payment of a year's subscription to the American Bee Journal, we will mail both of these songs free, *if asked for.*

GEORGE W. YORK & CO.
144 & 146 Erie St., CHICAGO, ILL.


OUR TOIL DOTH SWEETEN OTHERS

A Celluloid Queen-Button is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-lapel. It often serves to introduce the subject of honey, and frequently leads to a sale.

The picture shown herewith is a reproduction of a motto queen-button that we are furnishing to bee-keepers. It has a pin on the underside to fasten it. Price, by mail, 6 cents; two for 10c; or 6 for 25 cents. Send all orders to the office of the American Bee Journal.



The Record

Began advertising experience as editor of Commercial Union.

Organized Western Agricultural Journals Associate List, "Leaders of the Great West and Star of the East."

Began Publication of Agricultural Advertising. Founded, named and edited it.

Organized and established The Frank B. White Company. Originated its policy formulated its methods and made it a success.

Increased capital stock of Frank B. White Company, enlarged its capacity and gave it a commanding position among the great advertising agencies.

Sold my interest in the Frank B. White Co. and began the publication of Class Advertising.

Organized White's Class Advertising Co. under the laws of Illinois with a capital stock of $100,000. Leased commodious offices in the Caxton Building and am prepared to originate, design and place class advertising and to do more business and do it better than ever before.

In the Light of the Past we go Forward

Will you use our Light

"I know no guide but the lamp of experience," said Patrick Henry.

The lamp of my experience which in 1886 was like the faint glimmer of a tallow dip light has after being at it 17 years become the search light that illuminates the whole field of class advertising. White's Class Advertising Co. has secured the front half of the ninth floor of the Caxton Building, 334 Dearborn Street, Chicago, with more than 2,000 square feet of floor space which is being equipped with the most modern conveniences for the transaction of a modern advertising business along class lines. I shall be glad to talk about my special service system which was originated and developed by me and has been successfully used in behalf of many advertisers.

Frank B. White
Counsellor at Advertising
334 Dearborn St., Chicago

White's Class Advertising Co. is the name of a new company recently organized here in Chicago, its object being that of placing advertisements in class papers—advertising agents in the agricultural line, principally. Mr. Frank B. White, who has had 17 years' experience in the business, is the president of the company; E. J. W. Dietz, vice-president; George W. York, treasurer; and W. C. Gray, secretary.

On the evening of April 30, the new company gave a banquet to some of its friends and stockholders, at the Union League Club of Chicago, there being nearly 80 present. Dr. C. C. Miller was there, to represent the bee-keepers. The above design, with reading enclosed in border, appeared at each plate. After the banquet board was cleared of its tempting viands, addresses were delivered along the advertising line, with frequent very complimentary allusions to Pres. White, the host of the evening, whose high character and business ability among both advertisers and publishers are greatly appreciated. The Editor of the American Bee Journal has been closely associated with Mr. White for about 10 years, and is glad to be able to endorse all the good things said of Mr. White.

"Class Advertising" is the name of a handsome monthly magazine published by the Company. It is devoted to the advertising side of the business of manufacturing and putting on the market everything used by those engaged in rural industries. Every advertiser and every manufacturer of the goods indicated should read "Class Advertising" regularly.

The new Company starts out with excellent prospects of a bright and profitable business career. Any of our readers or advertisers who may need the services of such a concern will do well to consult them.

ESTABLISHT IN 1861

AMERICAN BEE JOURNAL

THE OLDEST BEE-PAPER IN AMERICA

43d YEAR. CHICAGO, ILL., MAY 14, 1903. No. 20.

✻ Editorial Comments. ✻

Hastening the Granulation of Honey is a thing that has hardly been desired in this country heretofore, the prevention of granulation having been the thing eagerly sought for. In Europe, however, the hastening of granulation has been more or less discussed for years. It is possible that in some cases it may be a matter of interest in this country. It is well understood that cold helps granulation. Occasional or frequent stirring is also a help, and it is said that frequent agitation gives a finer grain. Another thing that may be done to hasten granulation is to stir into clear honey a small portion of candied honey, the granules serving as so many centers from which granulation starts.

Phacelia in Germany.—A letter in Gleanings in Bee-Culture gives a glowing account of phacelia as a forage-plant in Germany; and many have praised it in the German bee-journals. It seems a little strange that no California bee-keeper has anything to say about it as a forage-plant, although it was introduced into Germany from California. The letter referred to is as follows:

Dr. C. C. Miller says, page 8, speaking of phacelia: "But no one has told us yet about its value as a forage-plant." A Mr. Karger, of Schreibendorf, writes: Mr. L., a practical farmer, sowed about the middle of May, phacelia on a piece of ground that had been in potatoes the previous year. Notwithstanding the cold and wet weather it grew luxuriantly, and reached an average height of 32 inches. While the phacelia was in bloom, although Mr. L. fed it to cattle that had been getting grass and green clover, yet they ate it voraciously. He also noted an increase of milk in quantity and quality.

A Mr. Haunschild, of Klein-Sagewitz, says that a farmer of his place had seven acres of phacelia; after the first cut of red clover had been fed, the phacelia was cut while the second week in bloom. The cows ate it with eagerness, and could hardly get enough. I think the above testimony ought to be sufficient to encourage all those to a trial who would like to have a bee-plant that might be grown in quantity to fill out a gap in the honey-flow, while its value as feed (green or hay) would pay the farmer for his trouble and expense, apart from its value as a honey-yielding plant. Phacelia begins to bloom about six weeks after sowing, and care should be taken not to sow it too thick.

Giving Frames of Brood from one colony to another is a matter that requires some judgment. If the object be to strengthen the colony to which the brood is given, then the more mature the brood the better, for giving a frame of brood about ready to emerge is much the same as giving the same quantity of young bees a few days later. It must be remembered, however, that it is also the same as taking bees from the colony that furnishes the comb, and it is generally very poor policy to strengthen a weak colony at the expense of a stronger one early in the season.

There are cases, however, in which, even early in the season, there may be a decided gain by giving brood from one colony to another. Sometimes a colony is found with a good force of bees, but without a queen, or having a young queen not yet laying, perhaps just emerged. Give to such a colony as many frames of brood as the bees can cover, but let the brood be *as young as possible.* If you take from a strong colony a comb of eggs or very young brood, and then put in the middle of the brood-nest an empty comb, or one containing honey, it will be promptly occupied by the queen, and thus you will have at the end of three weeks the bees produced from two combs instead of the one. So long as you may think it desirable for any reason to continue a colony that has not a laying queen, you will find it policy to furnish it with brood from other colonies, always as young as possible. If a young queen not yet laying is present, it is believed that the presence of young brood will in many cases hasten her laying.

Bees as Messengers.—Perhaps two or more years ago accounts were given of experiments across the sea in which bees were used somewhat as carrier pigeons, and now a clipping from the Toledo Blade has been received which probably refers to the same experiments. M. Tagnac fastened pieces of paper to bees at a distance from their homes, and when they returned to their hives they could not enter because the entrance was made too small for them to pull the paper through. The success of the experiments was based on the ascertained fact that bees would find their homes at a distance of 4 miles.

The likelihood is that there has been nothing new in this line, and that the old item has simply been furbished up for the sake of filling up. A bee would hardly find its home at a distance of 2 miles, much less 4, unless it had previously been over the same ground, and encumbered with a weight the distance would be still shorter. It is not likely that bees will ever be regularly employed to carry messages.

Hatching Eggs Over Bees.—We have received the following on this subject, which was up several years ago:

EDITOR YORK:—I enclose you a clipping to ascertain whether you can substantiate the statements therein made. As I keep poultry in connection with bees, it is quite a discovery, if true.

Kitsap Co., Wash. W. F. BRAGG.

The clipping sent by Mr. Bragg reads as follows:

HATCHING EGGS WITH BEES.

John Norton, of Illinois, has, for several years, been interested in bees, and has given them and their habits much study. It was this study that led Mr. Norton to devise one of the most interesting, and at the same time, most practical schemes of modern poultry culture. It is nothing more nor less than the hatching of thrifty and strong chickens in hives with the bees.

In watching the daily life of the busy insects, Mr. Norton noted that they laid and hatched eggs. It at once occurred to him that if bees' eggs would hatch, that the eggs of hens might also be quickened into life under the same conditions. He began experimenting, and with the final result of a practical, perfect, and cheap incubator. It is made as follows: A common hive is built with double walls, the dead space being filled with chaff in order that changes of temperature without may affect as little as possible the temperature within. Upon this hive is placed the common box cap that usually forms the second story of a hive, and which contains the honey of commerce. The main hive is filled with small boxes so familiar to all, and these contain the brood-comb and a supply of honey. Over these boxes is placed first a piece of oil-cloth and second a cloth blanket. Upon this blanket the eggs are placed, and above them two bags of chaff, filling the top, and so arranged that there is a slight cone of vacant space beneath the bags in the hive. The eggs, having been placed in the hive, are left to the care of the bees. The heat from the bees below, and from the brood-comb, keeps the eggs warm, and they hatch in exactly the same time as beneath a hen. No matter what the temperature without, that within never varies half a degree. If it grows cold the bees begin to devour the honey and give off heat. If it becomes warm without, the bees create a draft with their wings, and maintain an even temperature.

From 50 fertile eggs, at three different times placed in the hive, Mr. Norton has hatched 50 strong chicks, a record seldom equalled by hen or incubator. The eggs require no moistening as in an incubator. They need only to be placed there and allowed to remain till the period of incubation is passed. The chicks, as they hatch, crawl into the little cone-like space between and under the bags of chaff, and are found hungry and happy when the hive is opened. Mr. Norton is to be congratulated on the success of this experiment.

We sent the foregoing to Dr. C. C. Miller, who has this to say about it:

I read that clipping to a friend who is somewhat familiar with both bees and poultry, and after reading it I said, "What do you think of it?" The answer came very promptly, "I don't believe it." I am strongly inclined to the same way of thinking. There have been reports of hens' eggs being hatched out over a bee-hive, but that a bee-hive could come into successful competition with a good incubator or a respectable biddy seems very doubtful. If eggs need turning in an incubator or under a hen, why should the turning not be needed over a colony of bees? The heat might be sufficient in a spell of very hot weather, but in a chilly night it is not very likely that the heat from a colony of bees would be sufficient to answer. Of course, I don't know; I'm only saying how it looks to me. One thing gives away the story as being written by some one not well versed in bee-matters: "The main hive is filled with small boxes so familiar to all, and these contain the brood-comb and a supply of honey." That is, the brood-chamber is filled with sections! C. C. Miller.

And now comes Dr. G. P. Hachenberg, of Travis Co., Tex., who gives his experience as follows:

Editor York:—After carefully testing the temperature of a small colony of bees confined in one story, I placed a layer of fresh chicken eggs in the bottom of the second story, loosely wrapped in some woolen flannel. The eggs were separated from the bees with a newspaper, and carefully dated, so as to be sure to have them removed after the period of their incubation. They were set at large before the shells were fully broken, to guard them against the attack of the bees. The eggs required occasional turning, but no moisture.

In regard to the nursing of the little chicks, I had at the same date on the eggs set a hen with about 15 eggs with like date. These would come to maturity about the same time. After the chicks were hatched by the bees they were united to those of the hen, making in all a brood of 25 or 30 little chickens. These large broods are often seen in this climate, uniting the broods of one or more hens, and putting them under the care of one hen.

Some years ago I think I reported to you having a hen hatching eggs close to a bee-hive; the object was to prevent a valuable dog from eating the eggs. The dog had a great horror of bees, and he never went near those eggs, and the experiment proved a success.

G. P. Hachenberg.

When doctors disagree, who shall decide? We can't act as umpire in this game. Mr. Bragg would better try it for himself.

Association Notes.

Mr. Wm. A. Selser, of Philadelphia, Pa., has been appointed by the Executive Committee of the National, to succeed the late Thomas G. Newman, as member of the Board of Directors.

Mr. Udo Toepperwein, of San Antonio, Tex., has been appointed by the Executive Committee of the National, to succeed Mr. A. I. Root, as member of the Board of Directors. Mr. Root resigned recently.

The Chicago Northwestern Convention Report will be resumed after publishing the proceedings of several other conventions which can be disposed of at the rate of about one a week. After that the Chicago-Northwestern will be continued until completed. We have copy of all the last day's proceedings, which are very interesting indeed. We regret that we have not the room to spare to finish up a lengthy report in a less number of issues. But sweetness long drawn out is best sometimes, we suppose.

Hurrah for Illinois!—The State Legislature has passed the Bill in the interest of bee-keepers in this State. The last we heard it needed only the signature of the Governor to make it a law. The Illinois State Bee-Keepers' Association has full charge of the $1,000 provided in the Bill, and also the expenditure of the same.

The provisions of the Bill are quite general, so that the funds can be used for various purposes for the benefit of bee-keeping in the State. We have no doubt that the officers of the State Association will see that is expended wisely, and that much good will result from its use. We think the first thing needed is to provide one or more foul brood inspectors, who shall visit apiaries diseased, and thought to be diseased, and thus endeavor to rid the State of foul brood, or any other bee-disease as rapidly as possible.

We give herewith a copy of the Bill as passed:

A BILL

For an Act making an appropriation for the Illinois State Bee-Keepers' Association.

Whereas, The members of the Illinois State Bee-Keepers' Association have for years given much time and labor without compensation in the endeavor to promote the interests of the bee-keepers of the State; and

Whereas, The importance of the industry to the farmers and fruit-growers of the State warrants the expenditure of a reasonable sum for the holding of annual meetings, the publication of reports and papers containing practical information concerning bee-keeping, therefore, to sustain the same and enable this organization to defray the expenses of annual meetings, publishing reports, suppressing foul brood among bees in the State, and promote this industry in Illinois:

Section 1.—*Be it enacted by the People of the State of Illinois represented in the General Assembly:* That there be and is hereby appropriated for the use of the Illinois State Bee-Keepers' Association the sum of one thousand dollars ($1,000) per annum for the years 1903 and 1904, for the purpose of advancing the growth and developing the interests of the bee-keepers of Illinois, said sum to be expended under the direction of the Illinois State Bee-Keepers' Association, for the purpose of paying the expenses of holding annual meetings, publishing the proceedings of said meetings, suppressing foul brood among bees in Illinois, etc.

Provided, however, That no officer or officers of the Illinois State Bee-Keepers' Association shall be entitled to receive any money compensation whatever for any services rendered for same.

Sec. 2.—That on the order of the President, countersigned by the Secretary of the Illinois State Bee-Keepers' Association, and approved by the Governor, the Auditor of Public Accounts shall draw his warrant on the Treasurer of the State of Illinois in favor of the Treasurer of the Illinois State Bee-Keepers' Association for the sum herein appropriated.

Sec. 3.—It shall be the duty of the Treasurer of the Illinois State Bee-Keepers' Association to pay out of said appropriation, on itemized and receipted vouchers, such sums as may be authorized by vote of said organization on the order of the President, countersigned by the Secretary, and make annual report to the Governor of all such expenditures, as provided by law.

Mr. N. E. France, General Manager of the National Bee-Keepers' Association, informs us that several members whose bees have become an annoyance to neighbors, have had legal proceedings begun against them to remove their bees. They now want the National to stand by them. Mr. France says that first he must know the whole history of each case before he can advise the best procedure. He says that too many have bees in cities that are an annoyance, and can and should be removed, or the public protected in some way. He is for peace and good neighbors, employing lawsuits to settle matters only as a last resort.

Several large bee-keepers' associations have lately sent in the dues of their members.

Mr. France is after a honey-adulterating firm. He says he has good evidence, and will soon "come down" on them.

Mr. France is doing all he can to push the work of the National. He is indeed a very busy man, as a good General Manager properly should be if he does all that needs to be done in order to make the Association effective in the interest of its members.

❊ The Weekly Budget. ❊

Mr. John Nebel, senior member of the firm of John Nebel & Son, of High Hill, Mo., died May 5, in his 70th year. The old bee-keepers seem to be fast passing away.

The Apiary of A. J. Kilgore appears on the front page this week. When sending the photograph Mr. Kilgore wrote as follows:

I have 34 colonies in good condition. They are kept on the rear of my lot. The picture shows the rear end of the house; it shows also myself, but I am not particular about calling especial attention to this part of the picture. The small trees shown are fruit-trees—cherry, apple, pear, plum, and apricot.

I have kept bees more or less for 40 years, and find great pleasure in working with them, and in the study of their habits. The summer of 1901 was good for honey-production; my bees then averaged 96 pounds of comb honey per colony; but the summer of 1902 was very unfavorable, the average being about 30 pounds of comb honey. The fall flow, however, was good, so they laid in sufficient supply for winter.

I winter the bees on the summer stands packed well in planer-shavings. I have had a few cases of foul brood, but I treated them very successfully by the McEvoy plan. I rear my own supply of queens, buying one only occasionally to get a little fresh blood. I keep no queen more than two years, exchanging them for young ones. This I consider a very important item in the profitable management of bees. A. J. Kilgore.

Mr. Kilgore certainly has a beautiful home. He looks happy and contented with his lovely surroundings.

Convention Proceedings.

Report of Vermont Bee-Keepers' Convention.

BY M. F. CRAM, SEC.

The meeting of the Vermont Bee-Keepers' Association was held at South Hero, Jan. 28, 1903. It was a joint meeting with the Horticultural Society, they holding their meeting the day before, and the last evening there was a joint discussion between the two societies.

The bee-keepers' meeting was opened with a song by Prof. W. N. Phelps, entitled, "Good Old Summertime;" prayer was offered by Mr. Story; the minutes of the last meeting were read and approved, and the following committees were then appointed:

On Nominations—V. V. Blackmer and R. H. Holmes.
On Resolutions—M. F. Cram and H. L. Leonard.

REQUEENING AND OTHER MATTERS.

R. H. Holmes begged leave to digress from his subject a little at the beginning. Grand Isle County is a great place for fruit-growers and bee-keepers. The best bees are what we want for the fertilization of fruit. The islands are long enough for any bee, but not wide enough for large apiaries, but every fruit-grower should keep a few colonies of bees for the fertilization of fruit.

Some young man should keep on hand all the bee-supplies, so that any one can go there and get them.

Beginners should not buy high-priced bees, but should requeen later, if thought best. When a queen becomes worthless the apiarist should destroy it and give the colony another queen, or brood from which to rear one. The better way would be to buy a queen of some good, reliable breeder. Beginners should not get more than two colonies to start with, but should procure one or two standard books on apiculture.

Mr. Brodie, who is in the employ of the Canadian government, gave a talk on the "Spraying of Fruit-Trees." He said trees should be sprayed before the blossom is open, and again soon after the blossoms fall, but never while in bloom. The water would injure the fruit, even if there were no arsenoids in it.

VALUE OF BEES TO THE FRUIT-GROWER.

"Of what value are the bees to the fruit-grower?"

Mr. Leonard said that the bees carry pollen from one blossom to another, thereby causing the fruit to set. He also said that small bees helped some in this work, but honey-bees did the best of all. Trees have been covered, thereby excluding the bees, but such trees produce no perfect fruit.

Mr. Cram spoke of the value of bees in raising buckwheat. The more honey you get the more grain you get. One man in Virginia thought he could get rich raising pear-trees. He set out a large number of Bartlett pear-trees. He got no pears, for the reason that his pears were all of one variety. He sold out to another man who tried it, but with the same result. He sold to a man who set out another variety of pear-trees, thereby obtaining a cross-fertilization of the two kinds by means of the bees, and obtained an abundance of fruit. He said he had a plum-tree which had never borne any fruit, with the exception of a few scrubs. Last spring he broke a branch from another tree and hung it in that one, and obtained an abundance of fruit.

The Italian bees are the best fertilizers for clover, while the black bees are the best for buckwheat.

SHAKEN SWARMS—SAINFOIN—COMB FOUNDATION.

Mr. Blackmer said he preferred to let bees swarm naturally.

Prof. Shutt—On the Experimental Farm at Ottawa, Canada, John Fixter, the man who runs the station, said sainfoin was a very good plant for honey. Prof. Shutt said he had tried several experiments to see if bees would injure fruit, but he had never known bees to injure sound fruit.

In his remarks about foundation he said if we use very thin foundation the bees have to manufacture wax. If it is too thick it leaves a "fish-bone;" the medium-weight founation being the best.

Unripe honey had done some damage to the market. Extracted honey had been known to absorb 15 to 20 percent of water, and usually had 15 percent when taken from the bees. Honey should be kept dry and warm.

The afternoon session opened by two recitations from C. W. Scarff, one entitled, "His Uncle Hi's Sunshine Factory," and the other, "When I Get Rich," both of which were very entertaining.

The secretary's and treasurer's reports were read and approved.

THE PRESIDENT'S ADDRESS.

Another year has rolled around since last we met to talk over together our mutual interests as bee-keepers, our hopes and fears, our progress and our failures.

The past season in northern New England was quite unusual. Not since 1872 have we had such a rainy summer, and even that unusual summer was less cold than the past season, and yet, notwithstanding the cold and wet, the bees, as a rule in northern New England, have done well, having stored enough for winter, and surplus sufficient to repay their master for his timely care and attention.

We are in many respects highly favored here in Vermont, so far as concerns the health and vigor of our bees. While in most of our Northern States foul brood has been and is still doing great harm to bee-keeping interests, our State, so far as I know, is entirely free from this dread disease. It is true that what is known as "pickled brood" has made its appearance, but, so far, has done far less harm than was feared when it first appeared.

For the best grades of honey the price has ruled higher the past few months than for several years past. While this may be in part owing to light crops in other sections, there is reason to believe that the general prosperity of the country has much to do with it.

There is also a growing demand for honey as a wholesome and delicious article of food, in many families where it was in the not distant past unknown.

A few years ago it was almost unknown in the grocery trade. To-day no well-equipped grocery store is without it. There appears also to be an intelligent and growing demand for extracted honey, and I have noted with some satisfaction that our Vermont extracted honey sells higher than any other in our larger cities. We might perhaps have expected this while Vermont comb honey is preferred to any other brand.

There has been, I am sure, some advance the past year in the improvement of our stock. Recent study has shown very conclusively that there is as much difference in a given number of colonies of bees as regards their productiveness as there is in the same number of dairy cows. Our best apiarists are taking advantage of this fact, and breeding from their most productive stock. And while we can not, as yet, control the mating of our queens as with other domestic animals, I believe we can improve our bees quite as fast by rearing our queens from selected stock.

While we have no reason to complain or take a pessimistic view of the future, yet there are some things we may as well frankly admit as not altogether hopeful. The noble linden trees—the pride of our forests—are fast disappearing before the ax of the lumberman. We feel quite sure that the new growth does not nearly make good that cut down from year to year. Whether alsike clover, which has become fully naturalized in our Champlain valley, will make the loss of basswood good, it is yet too early to decide. I believe it will go a long way towards it. It winters much better than white clover, and, when sufficiently wet, comes up in old meadows, along the roadside, and in unlooked-for places, as well as in well-tilled fields where the seed has been sown by the hand of man. I have no doubt that during the past season there were several thousand acres of this clover within range of my bees, to say nothing of white clover and other honey-yielding plants.

Much may be done, however, to retain our basswood forests. I know one extensive bee-keeper who has purchased a large block of land near his home that he may control the growth of basswood now standing, as well as the young trees that come up freely and mature rapidly when protected by larger trees. This will furnish basswood bloom as well as wood and timber for untold time.

The production of alfalfa honey in more than a half dozen of our Western States, is a fact that must be reckoned with. In a recent business trip through Nebraska, Wyoming, Idaho, Utah and Colorado, I was surprised at the rapid strides that are being made in the cultivation of this valuable forage-plant.

The Rocky Mountains may be to-day considered as one vast cattle-pasture, while the valleys, where water can be had, are covered with alfalfa. More than this, east of this grand range of mountains, is a broad belt too dry for corn or grain or Eastern grasses where this dry-weather clover seems to thrive most luxuriantly. And I hardly need to add that it furnishes food for bees as well as for cattle and sheep. Already alfalfa honey is more abundant than the far-famed white sage of California. The population of these alfalfa States is sparse, and most of the honey comes East in car-load lots. A few years since, I went to a large dealer in one of our New England cities, hoping to sell him my entire crop. Although early in the season, I found him stacking up a car-load of honey from Colorado, which he had bought. Suffice to say I did not sell my own.

Alfalfa honey, both comb and extracted, is beautiful to look at; as white or whiter than our best basswood honey, with a flavor, to my mind, much inferior to our clover or basswood. It granulates quickly, which may account for its being regarded with less favor than Eastern honey, and selling for a less price. I do not, therefore, believe it can compete with our comb honey. It may be different with extracted honey.

During the last two or three years a renewed interest has sprung up in bee-keeping in Cuba, and many bee-keepers have gone to that wonderful island to engage in their favorite pursuit, and are building up apiaries with marvelous productiveness. What the results will be no one can tell. The honey is probably not equal to our Northern honey. The great bulk of it is extracted or "strained," and finds a market on the other side of the broad Atlantic. But the Yankee bee-keeper in Cuba is not satisfied with two cents a pound for his honey, although produced in great abundance, and already he is shipping comb honey to New York. Upon his success in this venture will depend in some measure the future price of honey during the latter part of winter, at least. How well we may be able to meet this influx of honey from Cuba and the far West, is a question for our consideration and most careful solution. One way I will at this time suggest, is the opening up of new markets, or increasing the demand where it is already known. In 1860 the New York market was broken down by what was then considered an enormous amount of honey—20,000 pounds. To-day that market will take hundreds of thousands of pounds of honey without a thought of being overstocked.

There is, I believe, a good and growing demand for extracted honey for table use, and this should be encouraged, as honey in this form is of almost as great value as food as butter at half its cost in the open markets.

During the past season I have made some experiments in securing white combs, or, rather, in preventing travel-stains, with fairly good success. The past season has been bad for the staining of combs, and yet, with a large number, I was able entirely to prevent it, or greatly reduce it, by the use of a properly constructed honey-board. I disliked to use or try even this remedy, fearing it would reduce the amount of surplus, but I have not found any serious objection.

My experience, the past year, with bleaching combs somewhat stained, has been quite satisfactory, thereby placing some six or seven thousand combs into the first grade, that otherwise would properly have been placed in a grade below.

I am also well pleased to state at this time that I am quite satisfied with the plain section and fences, giving bees free passage-ways around the edges of sections, as well as through the fences from one to another.

During the last few months some considerable space, in some of our bee-papers, has been given to the discussion of brushed swarms, or, more properly, forced swarms, for the purpose of preventing natural swarms. From my experience along this line I am led to believe that it at least promises well. Having practiced it to some extent for many years, I believe it is of much value in yards of bees that we can not visit more than once a week; that it will to a large extent control swarming, and at the same time give us a fair yield of honey. J. E. CRANE.

Mr. Leonard wished to know whether sunshine would bleach combs without the use of sulphur. Mr. Crane said it could, but not as easily, nor is it as practical as with sulphur and common light.

A BEE-KEEPER'S TRADE-MARK—OTHER SUBJECTS.

Mr. Leonard said that a bee-keeper certainly should if he is an honest and practical man. The Government should make people mark their honey, and all other produce. Honey should not be faced, but should all be alike in the same case.

Mr. Crane would store honey in a chamber; high temperature is the best place in which to store.

How best to destroy queen-cells? Cut them out with a knife.

What is the cost of a queen-bee? From three to five dollars.

How shall we treat the new swarm so it will be less likely to start for Canada? Hive it in a clean hive, put in foundation or drawn comb, if you have it, or a frame of brood from some other swarm, and without queen-cells, is better still. Remove to a shady place as soon as hived; the farther from the place where they clustered the better.

A committee appointed one year ago to see if the bee-keepers and horticulturists would unite, reported it not practical.

V. V. Blackmer gave an interesting account of his six years' experience in bee-keeping in Florida. How the first winter he was there the big freeze came which wiped out thousands of acres of orange-groves, and killed nearly all of the honey-producing plants, and for the last eight years the bees have hardly made a living over the greater part of that State.

A vote of thanks was tendered the Canadian friends for their help in this convention.

Mr. Crane gave a talk on "Improving the Honey-Bee."

The committee on nominations reported the following: President, O. J. Lowrey; Secretary, V. V. Blackmer, of Orwell; Treasurer, H. L. Leonard; Vice-Presidents: for Addison Co., G. C. Spencer; Orange Co., M. F. Cram; Rutland Co., V. N. Forbes; Lamoille Co., E. K. Seaver; and Chittenden Co., C. M. Rice.

The committee on resolutions made the following report:

"We, the members of the Vermont Bee-Keepers' Association, do hereby tender our most sincere thanks to the people of South Hero for the very cordial reception they have given us, and for their bounteous provisions for the inner, as well as the spiritual and social, man.

"We would also thank our visitors from over the Canadian line for the insight they gave us into the doings of their Government—in our as well as kindred pursuits.

"Also to Prof. L. R. Jones for his address, and to the railroad companies who granted reduced rates to the convention."

M. F. CRAM, }
H. L. LEONARD, } *Com.*

Contributed Articles.

No. 3.—"Scientific Queen-Rearing" Book Combines All.

BY G. M. DOOLITTLE.

I HAVE waited since writing what I did on page 569 of the American Bee Journal for 1902, for the "smoke of battle" to clear a little on the queen-rearing subject, to see just what would be brought out in this matter. Many good things have been said, and many valuable ideas brought to light, the same being somewhat mixed with extravagant assertions, and, in some instances, rather immoderate language. For the good ideas and valuable things brought out, all ought to be extremely thankful. I believe that I, for one, have been much profited by this discussion, and wish here and now to thank those who have spent their time and talent in writing up this matter for the readers of the "oldest bee-paper in the world."

Then I see that some errors have crept into the minds of some, one of which is that Dr. Miller and others seem to think that Doolittle fully endorsed the "umbilical cord" idea, advanced by Dr. Gallup. This was not my intention, for I never claimed to know what the attachment was that I found holding the imago queen to the royal jelly. I had always supposed that it was Nature's means to keep the immature queen from resting on her head while she was being perfected in the cell, until I read the opinion of Dr. Gallup, and I am quite inclined to that opinion still. What I did intend to show was, that if there was any *virtue* in that "missing link" matter, such virtue was always present where queens were reared by the plan given in "Scientific Queen-Rearing;" and that Dr. Gallup was mistaken in classing all queens reared by that plan among those he called worthless. And I think those who read aught else into what I said on page 569 (1902) will see their mistake by turning to that page and reading the matter over again.

In fact, I cannot see that all this write-up does little more than to emphasize the principles as laid down in the book above referred to, doing this by laying a little stronger claims to these principles than was done in the book. Gallup's whole claim is based on queens being reared in rousing colonies at a time when the bees are inclined to rear queens, either from the swarming impluse, or from supersedure of queens. And this is just the ground taken by the writer of "Scientific Queen-Rearing." So my old teacher, and the author of "Scientific Queen-Rearing," agree exactly. All the author does is to show how queens can be reared by the Dr. Gallup way at the *will* of the apiarist.

Mr. Alley claims that the best queens can be reared by giving eggs or larvæ to rightly "conditioned" nurse-bees which, with or without the help of other colonies, nurses and care for this brood so given, that the best of long-lived queens are produced. This point is also covered by "Scientific Queen-Rearing," in that it provides for these same nurse-bees, *rightly conditioned* to produce perfect success in their manipulation of the little larvæ given them to mature into the best of long-lived queens; and does the same with less effort on the part of the apiarist than is necessary where the bees to build the cells must be sought out, "scientifically treated," confined in a box for a certain length of time, etc.

Then it exactly fills the bill of Mr. Riker, in that it provides for a laying mother being present at just the time when bees rear only queens which give those long-lived workers which hold out during the *whole* honey harvest, that enables the apiarist to secure the full results of the honey-flow, and which could not be obtained by queens giving bees with shortened lives.

In short, the plan given in "Scientific Queen-Rearing" *combines* the large hives with rousing colonies under the "swarming or superseding impluse," which "manufacture a large amount of electricity, heat or vitality," of Dr. Gallup; the "conditioned" nurse-bees, wanting a queen, of Mr. Alley; the rearing of queens when the "mother is present," of Mr. Riker; the selecting of those of the "proper age" for queen-rearing without interference of "older bees," of Messrs. Pratt and Simpson; and the "temperature and humidity," through plenty of nurse-bees and food in abundance, (from feeders when the same was not coming from the fields), of Mr. A. C. Miller; and is perfectly adapted to the wants of any bee-keeper, from the one having only two or three colonies, up to the one numbering his colonies by the hundreds or thousands. And there need be no limit as to size of colony used, in the large direction. Dr. Gallup's biggest colony can be used just as successfully as can one fully occupying a 10-frame hive, or one just ready to swarm in a two-story 8-frame hive. Just slip in a queen-excluding division-board, so as to enclose from three to five frames of young brood in the warmest part of the hive, thus shutting the queen away from them, and you are ready to proceed at once in rearing queens of the highest grade possible to obtain under any of the conditions named by any of the plans or theories advocated by any one during the past five years; and those which will be just as long-lived and give just as long-lived workers.

The *principle* is the same, whether we use upper stories with a queen-excluder between; a very strong colony with three or four frames of young brood shut away from the queen, by a queen-excluding partition being slipped down into the hive; or the same number of frames of young brood being shut away from the queen in the center of one of Dr. Gallup's big colonies in his 40 or 50 frame hives. And it would take quite a stretch of imagination for one who has *carefully* read "Scientific Queen-Rearing," to conceive the idea that the author claimed that the reason that perfect, long-lived queens were reared by that plan, "was just because cell-cups are used." Yet some are trying to prejudice against the plan on those very grounds. The cell-cups are only a *convenience*, not a necessity. I have reared just as good queens by this plan with strips of comb having eggs and young larvæ in the cells, killing every other, or two out of every three larvæ, *a la Alley*, and with larvæ transferred into every other cell of a strip of drone-comb, as recommended by others; but, as a whole, neither of these are nearly so convenient as the cell-cups.

Some seem to think that nothing has been said or written about long-lived bees and queens till of late. This is not so. Dr. Gallup does not stand alone in this matter, neither is it a new thing. This part has been emphasized during the past, by one of Canada's greatest honey-producers. Mr. J. B. Hall; also by Mr. Riker, Doolittle and others; but if I am right, Mr. Hall was the pioneer in calling attention to the matter. There is great advantage in such queens and bees, especially where the latter are reared with an eye on the coming harvest.

Regarding the many queens purchased by Messrs. Gallup and Alley being worthless, I take it they were speaking metaphorically. I cannot think they fully meant what their language would convey. As Dr. Gallup alludes to the matter of an exchange of queens between him and Dr. Hamlin's best and prolific queens proved in the other's hands to be the same worthless degenerates (?), which would not keep two or three frames filled with brood with all the coaking at these Doctors' command, these queens being similar after the exchange to those which have been so roundly and immoderately condemned, it would appear that such language conveyed more than was really intended.

And as proof of this I will say that I had one of those worthless (?) Hamlin queens sent me as a premium for securing the most subscribers to a certain bee-paper in a given time. The queen came in June, and as she was from one of the best breeders of the seventies, I thought to give her the best possible chance, which I did. Imagine my surprise to find that with all my extra care and coaxing, I could get her to put eggs in only three Gallup frames, and very scattering at that. I came very near pinching her head off in the fall, but finally concluded to give the colony frames of brood and honey from other colonies, and thus the colony was gotten through the winter. The next season she proved no better than she had the year before, and I have no doubt Dr. Gallup would have called her a "worthless degenerate," and Mr. Alley would have alluded to her as "worthless as a house-fly." Was she thus? Well, we shall see.

I had her in my hand one day, being just about to pinch the life out of her, when the thought arrested me, that Dr. Hamlin would not send me a worthless queen as a premium, and that I would rear a few queens from her, which thing I did, she dying soon afterward, of apparent old age. All of these young queens proved to be extra good ones, and one of them was the mother of the colony which gave me 566 pounds of honey in 1877, and was used in laying the foundation of my present apiary. 466 pounds of this honey sold at 20 cents-per pound, and 100 at 15 cents, the total cash resulting from that colony that year being $108.20. Was her mother worthless? Quite a "house-fly," wasn't she? Stood way up by the side of the best of cows as to value! The honey sold from this colony during that year amounted to $8 20 more than Mr. Alley prized his $100 queen at, and lacked only $91.80 of giving as much cash in a single year as the celebrated Root long tongued queen was ever valued at. And yet, if I do not misinterpret Dr. Gallup, he would no more have bred from that Hamlin queen than he would from those two imported, worthless (?), degenerate (?), house-fly (?) queens he got of A. I. Root, which he tells us about on page 423 of the American Bee Journal for 1902.

Right here is where many purchasing queens make a great mistake: If the purchased queen does not almost immediately outstrip anything they have in their apiary, she is condemned at once as a *breeder*, if her head is not pinched. I have had scores of letters telling of queens purchased from different queen-breeders which did not do well in the purchasers' hand, they condemning the breeders for sending out poor, worthless queens. I generally write asking if they have reared any young queens from them, and the reply generally is, "No, I killed the queen," or, "She is not worth breeding from." A few have been pursuaded to breed from these seemingly worthless purchased queens, and I have several letters in my posession thanking me for insisting on their breeding from these *apparently* poor queens, for thereby they have some of the finest queens they ever possessed.

Too much emphasis cannot be laid on the fact that it is the *daughters* of the purchased queen which tell of the value of the mother. And this is a subject which is also treated on in "Scientific Queen-Rearing." Had those parties who reported to Dr. Gallup that "Doolittle's queens did not turn out right," bred from them, it is barely possible that they might have found out that they had something similar to what I had in that Hamlin queen. My advice to all is not to condemn a purchased queen till you see what her daughters will do. If such daughters all appear to be poor, then it would be quite reasonable to decide that their mother was truely worthless.

And now, in closing this already too long article, allow me to repeat that I am in no financial way interested in

"Scientific Queen-Rearing." I have written what I have in favor of the book, because I fully believe that the bee-keeper who follows its teaching will be benefited thereby. in that he or she will be enabled to rear queens superior to those reared in any other way. Onondaga Co., N. Y.

[We mail "Scientific Queen-Rearing" for $1.00, bound in cloth, or 60 cents in leatherette binding. The cloth-bound book we club with the American Bee Journal one year—both for $1.60; or the leatherette-bound book and Bee Journal one year—both for $1.40.]

Putting Unfinished Section on the Hives.

BY ARTHUR C. MILLER.

RECENTLY, Miss Emma Wilson entered a protest against the use of sections containing combs in which honey of the previous season had been allowed to granulate. In the Journal for April 23, Mr. Doolittle combats the idea that the use of such sections is in any way harmful. When the doctors disagree the patient suffers. In this case I think the secret of the trouble has been missed by both.

It is, I believe, the usual practice to give such sections to the bees, in the supers, when the latter are put on for the surplus. It is Mr. D's practice to have them cleaned out in the spring at considerable pains and cost. Ordinarily the sections reach the bees when they are ready to add honey to that already in the combs, and of course such mixed honey is bound to granulate early. Sometimes, when the old honey has slightly soured, the whole of the new honey in that section is turned enough to spoil it. Also some of the neighboring sections are sometimes affected by the transfer to them of the acid honey, such transfer being more likely when the flow is intermittent on account of storms, cold, etc. Few bee-keepers realize how much bees move honey about in the hive. Mr. F. B. Simpson first called my attention to this, and it is a most valuable discovery—I mean the extent of the practice.

When honey is coming in with a rush such transferring is lessened, but if it is coming in fast enough to have *any* put into the sections, the bees will not remove and clean out the old even though they may move some of it about.

The foregoing, I think, will explain the why of the described combs causing trouble. Mr. Doolittle has his combs cleaned out thoroughly in the spring, others have it done in the fall. The results are the same.

Each bee-keeper must decide for himself, or herself, whether he or she will use the wholesale fall way, or the retail spring way; but either way, *don't* give the sections with the honey in them. Have them *dry*.

Providence Co., R. I.

The Value of Breeding or Other Stock.

BY H. L. JEFFREY.

I HAVE read and reread the article by Henry Alley, on page 24, headed, "Can Good Queens be Reared by a Cupful of Bees?" There are two or three points in that article that interest me very much, and they are always left as they seem to be by Mr. Alley, without any backing up by facts or by comparison with the raw material proof from pure and unadulterated laws of Nature. The first one is the answers in Crude Nature to the heading question. That one I will pass now, and take up the point where he says, "How this statement will make Editor Hill of the American Bee-Keeper jump." There are thousands of people that not only jump, but they actually curse everything and everybody, whoever it may be, that places more than the butchers' price on anything, and the only reason for such discarding deduction of the valuation of perpetuating power always comes from the one idea of being cursed with the inability to produce superiority in anything. And the most galling thing to that class is, that in spite of their attempt to obliterate such superiorities, that very uncontrollable "Old Dame Nature," so tantalizingly just keeps poking one of her peculiar freaks just up into their sight, and just so far out of their reach that all they can do is to shake their fist and screech, "I wish the Devil had you!" But they forget to pay for a through ticket to his majesty, so it cannot be used.

But breeding-stock has a compounded compounding valuation. I will tell you why. A dairy-man I have known for 40 years, has, within the past 30 years or less, actually increased the butter quality of his own cows more than double what it was years ago. About 30 years ago he noticed that the offspring from a certain cow, and the blood of a certain bull, always gave evidence of superior quality, and, very quietly, and unobserved, he went to work to intensify that power in the reproductive force and line. Close inbreeding was resorted to, to a considerable extent, and once that ball of inparting force became starting on its way, and its volocity increased its own force, that dairy more than doubled its butter yield from the same number of cows, and therefore decreased the actual cost of production, which in the actual sense not only gave double the profit, but was 4 to 1. Doubling the yield per cow, actually reduced the expense more than one-half; double the yield, made one less cow to keep for the same result. One less cow to keep for the same results made room to keep one more cow to produce double the result, which is actually twice 2 are 4, or an actual ¾ profit against even cost and income; besides that, his intensifying the reproductive powers gave a like percentage value to all his neighbors that raised calves from their cows by his bull; and in dollars and cents added to the value of that man's breeding bull in ratio that his offspring became numerous.

This is not a fanciful sketch, but a solid, hard-pan, solid-rock, and past approvable fact, and one of those laws of the Old Dame, that cannot be drowned out of sight.

But some will say, "A breeding bull and a queen are not a particle alike." Well, just keep thinking so, and saying so, but suppose they both could speak and say, "You lie." Eh? They act it out; actions speak louder than words, or my eyes are without sight. But it is just the same with bees, only a less time required to produce the same results.

Only 12 years ago I saw 150 colonies of bees containing the daughters of one queen that produced more than double the quantity of honey that was produced by 200 colonies containing the hap-hazard, come-as-you-please queens. There was the close selection for quality followed up for seven generations to produce the superior qualities. The 150 queens were all reared in one season, the same persons owing the 200 other colonies owned the 150 queens, and their mother was worth just as much more than any other common queen as her progeny produced more pounds of honey than the common stock. Furthermore, if from that queen 10,000 queens had been reared, and each of their colonies produced only $1.00 more in honey than the common, average queen, that identical queen is actually worth the small sum of $10,000 to the bee-keepers at large; and then selecting from her daughters a very few breeders of like productive powers, that $10,000 is again compounded. And deny it if you can; but remember that "Whosoever speaketh the same, speaketh a lie, and the truth is not in him." Figures prove 1 from 2 but one remains; Nature proves 1 from 2, and 3 remain; or 8 from 2, and you have 10.

Litchfield Co., Conn.

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

Mr. Doolittle and the Sisters.

The kind words from Mr. Doolittle about the "Sisters Department" are thoroughly appreciated. Many thanks for the same.

Unfinished Sections Used as Baits.

Mr. Doolittle asks the question, "Why would Miss Wilson consider bait-sections spoiled because honey had candied in them?"

I consider them spoiled because it is difficult, if not impossible, to get the granules entirely cleaned out, and because such granules present act as a center to start further granulation.

Mr. Doolittle asks: "Can't the bees clean sections or the cells of the honey-comb as clean in the spring as in the fall?"

Probably they can, if the honey is in the same condition one time as another; but it is more likely to be candied in the spring, and then the job of spring-cleaning is very different from fall-cleaning.

He asks: "Can't they clean them *clean* and free from honey, whether candied or otherwise, in the spring, summer, or fall?"

Yes, I think they can. But it doesn't matter whether they can or not, if they won't. As a matter of fact, our bees *don't* clean out candied honey the same as they do liquid honey, and this is not "a belief in an old assertion, taking it for granted it was true," but a fact that I have seen demonstrated many and many a time. Any one can probably see the same thing demonstrated in almost any case in which a colony has been robbed out in the spring. The liquid honey will be taken, but the candied honey will be left, every time. The granules seem to be to the bees no more than so many grains of sand, and they are only removed, apparently, just so far as it may be necessary to remove them in order to get at the liquid honey.

Even if the bees should clean out the candied honey as well as the liquid, there would be an objection to the waste, for the bees throw away all the granules they carry out of the cells.

Mr. Doolittle tells about using sections for stimulative feeding, and says:

"Opening hives a week after they have been so treated, I have found them with more than doubled brood, and thought I was doing a nice thing in this way. But Miss Wilson says not."

I hardly think Miss Wilson ever said anything about it. She thinks he would be doing not only a nice thing, but a *very* nice thing to have "more than doubled brood" in a week's time. But she would prefer that the feed should be given some other way than in sections of candied honey, and Mr. Doolittle will probably agree that for stimulation it would be better to have thinner feed, and that at least part sugar would be cheaper.

Mr. Doolittle asks if I have tried fall-cleaned and spring-cleaned sections side by side. No, I never made any exact comparison. I would do so this year if I could find any sections containing any candied honey. But our honey has kept too well for that. Nearly a hundred sections are on top of the kitchen safe, most of them having some unsealed cells, but I can not find a single cell that shows the least sign of granulation.

But I think several have reported in the past years (I can not name them now), that their sectiions have been spoiled when spring-cleaned ones were used. If Mr. Doolittle succeeds, others may not be so fortunate.

It is probably not necessary to say that the least granule left in a cell will serve as a starting-point for further granulation; all scientists are agreed upon that; the only question is whether the bees will clean out the granules. The fact that I have seen so many cases in which the liquid was *all* emptied out of the cells and the granules left is pretty good proof; but if any of the sisters, or indeed of the brothers, have any sections of candied honey, by all means let us have them tried. If Mr. Doolittle is right we ought to know it.

Rightly managed, there is no need of having our beautiful sections torn. We have had thousands of them so cleaned without being torn in the least. Wrongly managed, they will be torn either spring or fall.

Lotion for Whitening the Skin.

The following is given in the "Health and Beauty Department" of the Chicago Daily News, as a good and harmless lotion for whitening the skin:

"Pure honey (extracted) four ounces; glycerine, one ounce; rose water, one ounce; citic acid, three drams; essence of ambergris or essence of rose, six drops.

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❋ The Afterthought. ❋

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, O.

CHAFF HIVES IN DIFFERENT LOCALITIES.

So in Wisconsin they don't take to chaff hives at all. In New York's best bee country they don't want anything else. Down in Missouri, Manufacturer Leahy gave his away, because he wanted his hives all so as to carry into the cellar easily. What snall we say, therefore? I'll say, If you have chaff hives don't give them away. I have some, and you are not going to get them free gratis. Page 213.

THE MICELESS HONEY-ROOM.

Happy Greiner! He has a shop and honey-room in which there are never any mice. I suppose hundreds of the brethren intended so; but, alas, the chasm between intention and realization! It's all just so as it ought to be—to put sections in the intended-to-be-mouse-proof box inside the intended-to-be-mouse-proof room. Honey-keeping by Double Entry better than honey-keeping by Single Entry. Page 214.

THE "POOR SEASON" AND "POOR PIE."

Apparently the "poor season" of some bee-keepers is like the "piece of very poor pie" which your hostess blandly invites you to take. Page 214.

ALFALFA-GROWING IN THE EAST.

I stand convicted, Mr. Johnson. I climb down. I had no right to speak of the tubercles of alfalfa as having "bugs" in them—and so throw the learners in natural science off the track. I guess my impression at the time was that the tubercle-dwelling germs *were* animal; and so my short-coming stands as a case of ignorance, and not as a frolicsome sort of perverse teaching.

Thanks to Prof. Hopkins for the information that clover bacteria will not serve the turn for alfalfa. And how well the pictures on page 212 tell the story—story of something lacking in the one case and of things all right in the other! It is quite reasonable for us to expect that alfalfa naturalized, and fully supplied with its own tubercle-dwelling bacteria, and flourishing like a green-bay tree, would yield honey here as well as elsewhere. Lack of nectar-flow seems to be a plant's usual method of protest—protest that although it can live and grow it is dissatisfied with some of the conditions. Present appearance seems to be that alfalfa is a coming crop; and with it we see a new light. Page 215.

JERSEY MOSQUITO AND BEE-STINGS.

O the Mosquito, the Jersey Mosquito!
In size, vim and venom she can not be beat, O!
She martyrs the natives, spring, summer and fall,
Until a mere bee-sting seems nothing at all.

A HUMMING FAMILY "OUTFIT."

Husband and I and Alice and Kate, eh? Who couldn't make the honey-business hum with such an outfit as that? Page 216.

SPRING-WATER IN BEE CELLARS.

No, Mr. Callbreath, it isn't the warmth of the spring-water that makes a cellar with a running spring in it one of the best of all places to winter bees. Running water oxygenizes and ozoneizes the atmosphere, and also dissolves the carbonic aid gas and carries it away. Ventilation of very best sort without any cooling, and *without any possibility of excess.*

THE NAME-ON-THE-SECTION CONTROVERSY.

Tell Alma Olson I am on his side (languidly) in the name-on-the-section controversy—and, lo, I come to give him an unbrotherly stab. He put his foot in it badly when he referred to the seedsman's name on the package of seeds. Many, if not most of the seed-packages, hold seeds raised by some specialist farmer and sold to the seedsman who takes the responsibility of them before the world. If I am right, the great seedsmen raise a great many seeds, but still buy more than they raise. I think the farmer would not be allowed to have his address on the seeds—pretty surely would not ask for such a thing. Page 220.

BEES STINGING AT A MARK.

C. Stimson will probably get the assent of many when he says bees generally sting at a mark mouth, nose, eye or ear. Is that really so, or do our imaginations get in their work there? I have sometimes thankfully wondered why a cantankerous bee kept away from my eyes so well. In regard to the ear perhaps I had better own up. (But then, consider the size of the territory in some of our cases!) As a hostile bee spends much of the time just behind one's head, the ear is the first exposed territory met with, on screwing up courage to the sticking point and coming to the front. Page 222.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

Questions on Queen-Rearing.

1. I am frank to confess that I am as green as grass on queen-rearing, and want to know more, and I do not understand some of the expressions used in the American Bee Journal, and also "A B C of Bee Culture." I take the American Bee Journal and Gleanings in Bee Culture, have also "A B C of Bee Culture," still I am thick-headed. In "A B C in Bee Culture," under queen-rearing, page 258, is a cut of a Doolittle cell-cup, and from the cut it looks as if the cells are put on the *bottom* of a stick to be put in a brood-frame, and cells appear to hang straight down. If so, what prevents eggs or larvæ from falling out when grafted?

2. What is meant under the same head, pages 260 and 261 of "A B C of Bee Culture," when it says, "When properly done the strips of comb will have cells slanting toward the bottom-board?" In other words, I want to know whether these artificial cell-cups and these strips of worker-comb cells point or hang perpendicular, or stand straight out like worker-comb as built by the bees in brood-frames, or point down at about an angle of 45 degrees. I know after bees take possession of the prepared queen-cells they build them out and down. But what is their position when man leaves them? From the cut, page 258, it looks as if man leaves them hanging straight down.

3. On pages 260 and 261, "A B C of Bee-Culture," it says, "shave one side of strips of comb." What becomes of the other side, and how treated, by man and bees? If as per instructions under queen-rearing, I put 2 frames of brood in the upper story, is there any danger of bees leaving it uncared for, and the brood and cell-cup dying from neglect?

5. Should cell-cups be put in the upper story when the frames of brood are put in, or wait a day or so to see if the bees are attending to and keeping the brood warm?

6. Will this queen-rearing in upper story in any way hinder storing? and should full sheets of foundation be furnished on either side of the brood for storing?

7. How soon after putting in these artificial queen-cells before I can tell whether the bees are working on them?

3. The Alley plan, as described on pages 260 and 261, would be less trouble, I think, to me. Do you think it as good, for one who knows nothing about queen-rearing, as the Doolittle cell-cup plan?

KENTUCKY.

ANSWERS.—1. Your supposition is correct; the cells are mouth down, just as the bees always build cells when preparing to swarm. Dip your finger in water, and a drop of water will be found hanging on the tip after your finger is taken out of the water—held there by cohesive attraction, the same that holds the contents of the cell in place.

2. In an edition of "A B C of Bee Culture" before me, I find, not "slanting toward bottom-board," but "pointing toward the bottom-bar." The cells point straight down, first and last. The only time when you will find queen-cells any other way is when the bees build emergency-cells from worker-brood, or in a very few rare cases in which the place is too cramped for the cells to be built straight down.

3. The side shaved down is the one on which the cells are started; the other side, not cut, is dipped into melted wax and then glued on the bar.

4. If one or more frames of brood are put in an upper story over a strong colony, there is no danger that the brood will be uncared for, but there is always some danger, anywhere and everywhere, that not all of the queen-cells will be properly cared for.

5. It will be generally safe to give the cells at the same time as the brood, although there may be an occasional case in which the bees are a little slow about occupying the brood.

6. It will not hinder storing, and foundation or drawn combs may fill out the story the same as if no queen-rearing were going on.

7. Generally within 24 hours.

8. An utter novice would probably find it easier to manage the Alley plan, and either plan produces good results.

Prevention of Swarming—Uniting Colonies.

1. Please give a description of L. Stachelhausen's invention to prevent swarming.

2. In M. R Kuebne's plan to prevent swarming, after the queen is laying, does he take out the entire board or just the wire-cloth and let them unite?

WEST VIRGINIA.

ANSWERS.—1. Mr. Stachelhausen prevents swarming by the shaken-swarm plan. You will find that fully given in back numbers, with Mr. Stachelhausen's comments also on page 245.

2. Take out the entire board, I suppose.

Colonies on Crooked or Bulged Combs.

1. I have about 20 colonies of bees, purchased last fall; they are in 10-frame Simplicity hives, and about 6 combs in each brood-chamber are bulged or crooked. I have sent for Hoffman self-spacing frames, and sufficient brood foundation for these hives, foundation to be wired in, in full sheets. I wish to run part of these hives for extracted and part for comb honey. How can I best change the old, buldged brood-frames to new brood-frames of foundation.

2. How would it do at about the beginning of the honey harvest to put a second story or brood-chamber (for extracted honey) with the frames of foundation, and a queen-excluder between; then every 3 or 4 days exchange a frame or two of brood for a new frame or two of foundation from the second story? Then when the brood has hatched out they will fill these combs with honey. Will this honey be damaged any by being stored in these old combs? and will these old combs make good beeswax?

3. What way would be better for extracted or comb honey in sections? Or would I better not try to produce honey in sections from any of these colonies this year?

OHIO.

ANSWERS.—1. If I understand you correctly, there are about four straight combs in each hive. Lift out these four combs and put them in another hive-body, looking to see whether you get the queen. If you get the queen, leave her with the four combs, and fill up each hive with the new frames filled with foundation. Take the old hive off the stand and put the new hive in its place. Put an excluder over this, and set the old hive over the excluder. Twenty-one days later there will be no brood in the upper story unless it be some drone-brood. Then you can extract the crooked combs, melt them up, or do what you please with them. If you do not find the queen on the four combs, and if the other combs are so fastened together that you cannot lift them out, then after you have put the four frames in the new hive, set the old hive on top of it with no excluder between, and drum the bees up, so as to get the queen above. Then put the new hive, as before directed, on the stand with the old hive on top and an excluder between. The queen must be in the lower hive.

2. The honey and the wax will be all right, but you will make a quicker job of it as already directed.

3. Necessarily you will have the old hive-body filled with extracted honey, but after that is pretty well filled you may let the bees do the rest of their storing in sections by adding supers of sections under the upper story.

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FROM MANY FIELDS

Wintering Bees.

The past winter was very favorable for bees. Colonies that had plenty of stores came through in almost perfect condition. We have lost 7 colonies, due to lack of stores and queenlessness.

In preparing for winter we used different plans: Packing above frames, sealed covers without packing, and sealed covers with super on. The conditions being the same, the result seemed to be in favor of the first two plans, and I believe I would use packing had

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I the means to keep the outside moisture from getting on the packing.

Prospects are favorable for the present season. Bees are doing a fine business from apple-bloom, and should the present good weather keep up they will get considerable honey.

I am thinking of building a shed for the bees so as to keep them from getting wet. I would have it open in front and arranged at the back part so that a person could get at the hives. Should any of the readers have any experience with a shed of this kind, I would be glad to hear their opinion of it.

E. N. Everson.

Jefferson Co., Ohio, April 22.

A Dry and Cool Spring.

The bees wintered well last winter, and clover came through also in fair condition, so that the prospects for honey were good here. But we have had a dry, cool spring and now we have just had a light rain followed by snow and a temperature of 24 degrees above zero. Plum and cherry bloom is about half out, and apple-buds about to open, so that the prospects for fruit-bloom are very slim.

A good season for fruit-bloom was needed on account of lack of good working-days for such other bloom as we have had heretofore.

So, while the loss of the fruit-bloom may not prevent a honey crop later on, it will very probably necessitate feeding.

I am thinking of making some troughs and feeding outside, as there are no other bees in the range.

Fortunately, the bees were almost all quite strong, so that they will probably be able to protect their brood. E. S. Miles.

Crawford Co., Iowa., April 30.

All Colonies Wintered Well.

Bees are doing nicely on dandelion, willow and cherries. All colonies came through the winter in fine condition. I winter them in the open air, having packed them with an extra covering. Fruit-bloom was killed by sleet and ice. The temperature went down to 16 below freezing. Gustavus Kolls.

Hall Co., Nebr., May 2.

Swarming Management.

On page 264, Wm. McEvoy gives his method of preventing swarms getting mixed up. I can see the advantage of his method, but many of the small bee-keepers, like myself, find it difficult to follow. Many of those that keep bees in this vicinity are farmers, like myself, and keep only a few colonies of bees from a very few up to 40 or 50, just for the pleasure of keeping them and having a little honey to keep us sweet. According to the definition given in the Bee Journal, we are not apiarists, only bee-keepers, and other work prevents us from giving that time and attention to our bees that is required of an apiarist. We do not have any help, but each one handles his bees alone, and it often happens that two or more swarms come out at the same time while the farmer is in the field at work, and before he can get to his bees they have all clustered together, and, the only thing to do is to hive them in one hive. I know of two instances of this kind that happened in this vicinity, and so many swarms clustered together that they could not be hived in a common hive, but were hived in a dry-goods box, and they stored several hundred pounds of honey.

Last year I had a swarm come out, and, after being in the air for a time, they returned to the hive without clustering, and while they were returning I looked in front of the hive and saw a small bunch of bees; on examination, I found the queen, picked her up with my fingers and put her on the alighting-board. The next day they came out again, and at the same time another swarm from the hive came out and were all mixed up, but clustered in two clusters about ten feet apart, and before I could hive them they all went together. They were both prime swarms and filled the hive full, and I got more honey from them than any three swarms last season.

A few days after this I had an after-swarm come out, and while I was hiving them an-

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other after-swarm issued, and came to the hive where I was at work, and they went in without clustering. I considered this an advantage for it made a good, strong colony that has wintered well, and is one of my best.

Last year was a poor one for honey. I got only about 300 pounds of comb honey from 16 colonies, spring count. I lost a number of colonies from spring dwindling and being robbed. My bees have wintered very well. I lost two colonies in the cellar. I put the bees out the first day of April. A few days after being taken from the cellar two colonies went into other hives near by. I suppose they were queenless. I now have 18 colonies, strong and healthy, and working well when the weather admits. It has not been very cold since they were taken from the cellar, but there has been too much rain for the good of the bees. To-day (April 30th) is the coldest we have had. The ground is covered with snow and the temperature this morning was 24. Bees are in better condition and working better than they did last spring.

I approve of nearly all the modern methods of handling bees, yet I am plodding along in the same old rut. I have for years been letting my bees swarm naturally. I do not clip the wings of queens, yet I have lost only three queens by absconding during the last ten years. I would rather not have any after-swarms, yet I do not cut out queen-cells, and if after-swarms come out I put two together, if possible, and so far I have been quite successful in doing it.

If our large apiarists read this article they will smile at my methods, and say they are old and out-of-date. This is true, and so am I old an out-of-date. I am 79 years old to-day. The modern methods and improvements are all right, but, at my advanced age, I find it difficult to keep up and adopt all of them. I am an old soldier, and can't keep up with the army, but when night comes I will try and be in camp, and "When the Roll is Called Up Yonder," I'll be there. S. B. SMITH.

Millelacs Co., Minn., May 4.

Bad Weather for Bees.

It has been very bad bee-weather for the last two weeks, in this locality. It freezes nearly every night, and this morning a snow-storm visited us, covering the ground with nearly two inches of snow. We are having a great deal of rain, which I hope will make a good honey season. I wintered but 2 colonies out of 4, the 2 that died being moldy. But each had nearly 30 lbs. of honey left. I sold some of it at 15 cents per pound, and used the rest to feed the other colonies, which are in good condition at present.

I watch for the American Bee Journal every Thursday; it is a welcome visitor here. B. F. SCHMIDT.

Clayton Co., Iowa, May 1.

Look for a Good Year.

Our bees came out of the winter in good shape, with no loss to speak of. We winter them here on the summer stands. We have had an immense fruit-bloom, but the weather has been so cold that the bees could not work more than half the time, but they have filled up their brood-chambers and are in excellent shape for white clover, which is abundant everywhere. We look for a good year. I found the first white clover blossom to-day, which is nearly one month early. Success to the American Bee Journal. C. ZOLL.

Fulton Co., Ill., May 2.

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This Emerson stiff-board Binder with cloth back for the American Bee Journal we mail for but 60 cents; or we will send it with the Bee Journal for one year—both for only $1.40. It is a fine thing to preserve the copies of the Journal as fast as they are received. If you have this "Emerson" no further binding is necessary.
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BEEDOM BOILED DOWN

Testing Honey-Barrels.

"To test honey-barrels before waxing, a bicycle pump is recommended in Gleanings in Bee-Culture, instead of blowing into the barrel with the breath.—American Bee Journal.

Blowing the breath into a barrel or can to test it for leaks, is very unreliable. A decidedly better way is to place the lips firmly in or against the aperture, draw into the lungs and exhale through the nose all the air possible, by repeated draughts, which necessarily become shorter as the air is pumped out of a tight receptacle. By this means much more power, with less effort, is exerted; and in case of a leak, in testing cans, the inrushing air from outside, while the breath is momentarily held to listen, will reinflate the partly collapsed tin, thereby keeping up a constant cackle and ring as the sides readjust themselves to the original position. In testing barrels, when a leak occurs, and while the bung is yet stopped by the human pump, the hissing of rushing air may be audible, or, if the leak be very small, the suction at the bung will be gradually reduced, and readily recognized by the pumper.—Editorial in the American Bee-Keeper.

Time for Cutting Alfalfa.

I have just read Bulletin No. 114, issued from the experiment station at Manhattan, and it says, "Alfalfa should be cut when not more than one-tenth of the plants are in bloom. Early cutting invigorates the plant. The late cutting of the first crop seems to injure the plant more than at any other time." In September, 1901, I planted six acres to alfalfa, and got a splendid stand. In the last week of May, 1902, I concluded that one-tenth of the plants were in bloom, and the crop was ready for cutting, and I cut ten swaths around the field. It set in so rainy and cloudy that I stopped the mower and waited two weeks for fairer weather, lamenting all the time that I was injuring the hay crop by letting it stand so long without cutting. But I was surprised, when I came to cut the second crop, to find that the piece that I cut earlier did not turn off more than about one-half as much as the piece I cut later; and this was the case with the third and fourth cuttings. All through the season I could distinguish the very line where the earlier cutting left off and the later cutting commenced. The ground and soil are all the same, rich bottom, about 30 feet above permanent water, no weeds, foxtail, or crab grass in the field. The hay from the earlier cutting did not remain on the field to injure growth of second crop. Please explain to me why my alfalfa acts so contrary.—J. M. CRAIG, of Anderson Co., Kans., in Gleanings in Bee-Culture.

Hiving Swarms on Shallow Frames.

When only a single story is used it is likely to result in the bees swarming out again. The editor of the Bee-Keepers' Review manages as follows:

When I began using the Heddon hive, putting a swarm into a single section, and putting on the sections, there was so much swarming-out that I came very nearly being discouraged. Finally, I began using both sections of the hive for a brood-nest for the first three days. On the fourth day I set the upper section, and the supers, to one side (crosswise of an empty hive), then set the lower section off the bottom-board, returned the upper section and supers to the old stand, and shook down in front of them the few bees that were clustering in the lower section. I used starters only in the frames, and, at the time of removing the section, the combs in the upper section were usually one-third or one-half completed. Some of the combs in the lower section were just nicely started, and

QUEENS!

Golden and Leather-Colored Italian, warranted to give satisfaction—those are the kind reared by QUIRIN-THE-QUEEN-BREEDER. Our business was established in 1888. Our stock originated from the best and highest-priced long-tongued red clover breeders in the U. S. We rear as many, and perhaps more, queens than any other breeder in the North. Price of queens before July 1st: Large select, $1; six for $5; Tested Stock, $1.50; six for $8; Selected Tested, $2 each; Breeders, $4. Two-frame Nuclei (no queen) $2.50 each

Special low price on queens in lots of 25 to 100.

All queens are mailed promptly, as we keep 300 to 500 on hand ready to mail.

We guarantee safe delivery to any State, Continental Island, or European Country. Our Circular will interest you; it's free.

Address all orders to

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PARKERTOWN, OHIO.

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Bred from best Italian honey-gathering stock, and reared in FULL COLONIES by best known methods. Guaranteed to be good Queens and free from disease. Untested, 75c each; 6 $4.00. Tested, $1.25 each. Untested ready July 1st. Tested about July 15th. Address,

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SWEET CLOVER

And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5lb	10lb	25lb	50lb
Sweet Clover (yellow)....	$ .90	$1.70	$4.00	$7.50
Alsike Clover	1.00	1.80	4.25	8.00
White Clover	1.50	2.80	6.50	12.50
Alfalfa Clover	1.00	1.80	4.25	8.00

Prices subject to market changes.

Single pound 5 cents more than the 5-pound rate, and 10 cents extra for postage and sack.

Add 25 cents to your order, for cartage, if wanted by freight, or 10 cents per pound if wanted by mail.

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Our motto in all departments is "Maximum efficiency at minimum cost."

Our scholastic training is equal to the best, our reputation first-class. All expenses for a year, aside from the clothing and traveling, less than $200.00. Co-education, health conditions, moral and religious influence, superior.

Send for catalog.

MOUNT UNION COLLEGE,
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Complete Line of Lewis' Matchless Dovetail Hives and Supplies at Factory Prices.

HIGH-CLASS QUEENS. — Buckeye Strain Red Clover Queens, they roll in the honey while the ordinary starve.

Muth Strain Golden Italians, None Superior. Carniolans, None Better.

We guarantee safe arrival by return mail.

APRIL, MAY, JUNE.

Untested ....$1.00 each; 6 for $ 5.00
Select Untested... 1.25 each; 6 for 6.00
Tested............. 2.00 each; 6 for 10.00
Select Tested .... 3.00 each; 6 for 15.00

Best money can buy...........$5.00 each.
2-frame Nuclei with Select Untested Queen $2.75

Send for Catalog and see SPECIAL INDUCEMENTS.

THE FRED W. MUTH CO. Front & Walnut Sts., CINCINNATI, OHIO.

Please mention Bee Journal when writing

I used this lower section as the upper section to the next hive in which I put a swarm.

This management did away entirely with the swarming out after hiving. It gave the bees plenty of room until they had cooled off and settled down to work, when it mattered little how much they were squeezed, there was no swarming.

Differences of Opinion About Time for Cutting Alfalfa.

Experiment stations should be able to decide such questions right, so farmers could tell exactly what is best; that is what the stations exist for. Experimenters can bring chemistry to bear on the subject, and then prove or disprove the practical application of the conclusions thus obtained by feeding stock and carefully noting results. Then, why don't they agree? Different environments naturally bring different results. It would seem strange if the most successful mode of handling alfalfa on rich, sandy loam would necessarily be best on a thin limestone soil where the growing season is more than a third shorter. The best hay for horses may not be best for beef stock or milk production. If any one has advocated very early cutting of hay in this valley, when the hay is intended for horse feed, it has never reached my attention. Many claim that alfalfa should be in full bloom for some time to make best feed for beef cattle, and many claim it should not stand so long. But when it comes to dairy stock, I do not know a man who has changed from late cutting to early, and then changed back to late cutting. As dairying is rapidly coming to the front, it is revolutionizing the alfalfa business. As farming is usually done on methods which are supposed to give the best average results, the alfalfa is all cut young where dairying is the main thing (and it generally is), and little thought is given to the small loss, if any, that is brought about by feeding the "wishy-washy" feed to other stock.—W. A. H. GILSTRAP, in Gleanings in Bee-Culture.

The Percent of Water in Honey.

At the annual meeting of the Ontario Association, Prof. Frank T. Shutt, Chemist of the Experimental Farms, Ottawa, gave an exceedingly interesting address relating to the proportion of water in honey. The address occupies a number of pages in the Canadian Bee Journal, and a few of the points are here given:

I said we had no Canadian data on the subject, and as far as I was aware the European authorities differed widely, for I found some authorities stated 10 and 15 percent of water, whereas I found other chemists gave as much as 25 and 30 percent of water; and then, on the other hand, there were those who endeavored to bring together the two, and said the proportion of water in honey might vary very largely, and that we should not be surprised at finding a variation of as much as 10 and 15 percent.

A large amount of work was done in the attempt to settle the question, with regard to which Prof. Shutt said:

However, I must make this statement at the outset, so that there may be no misunderstanding: It is very greatly to my disappointment that I am not able to tell you today what is the normal percentage of water in genuine honey, either ripe or unripe. We have done, as I have said, an exceedingly large amount of most careful, thorough chemical work since Oct. 1, but still I am not in a position to say really what the percentage of water is. Now, the reasons for that I will explain to you as I give these results. You will see it has not been a matter of negligence at all, but the question involved is one relating to the accuracy of the process now in vogue.

Referring to the great discrepancy in the results obtained by chemists in England and on the continent, he said:

One authority, J. C. Brown, gives dextrose as 31.77 to 42.02 percent; and levulose 33.56 to 40.43 percent. Another authority gives dextrose 22.23 to 44.71; levulose 32.15 to 46 89; water 16.28 to 24.95, and so on. On looking over those results carefully the one thing that will strike you is this, that there appears to be great variability in the analysis in the composition of various honey. I say "appears to be," because I can scarcely believe that there is such a great variation, but, nevertheless, the results as they appear on record would give that indication, viz.: that there is great variability.

Now, all these analyses have been made by men of reputation, men endowed with skill and with honesty, but the difficulty has been in connection with the material itself and the process of analyses employed. And now I think I can tell you the reason for this apparent discrepancy. We understand that the two principal sugars of honey are dextrose and levulose. Let us consider their properties: Dextrose crystallizes; this is the material which you see in candied honey. Levulose, on the other hand, does not crystallize; it does not become solid; it assumes the form of a thick syrup; it is the sweetest constituent of honey; it is much sweeter than dextrose; further, we find by experiment and analyses that in the artificial drying of honey it is extremely subject to decomposition; consequently during the ordinary and usual methods of analyses employed. as I hope to show you, decomposition of levulose takes place, and its disappearance has been recorded by the analyst as water.

Farther on Prof. Shutt said:

Now, my contention is this, that what we have been supposing to be water, and water only, as passing off in the drying process, is really in part the decomposed products of the honey. The longer you heat it, and the higher the temperature, the greater the amount of caramelization, decomposition, or, in other words, loss. We estimate the water by the loss in drying, and if part of that loss is due to the decomposition of levulose, we get too much moisture.

The longer the honey-tube is in the drying oven the greater the loss—and the higher the percentage of water—apparently. If there were no decomposition we should be able to dry to a constant weight, but this we find impossible. This, in my opinion, furnishes the explanation of the results as they appear in this bulletin of the Inland Revenue. Some analysts have dried for 24 or 48 hours, and some have been attempting by still longer drying to get a constant weight. If there were no decomposition a constant weight should be obtainable. But the fact of the matter is that our experiments show you can go on drying these tubes for several days and still they lose weight. Day by day we weighed those tubes and put them back in the water oven, and there was always a loss. From the first weighings we calculated the percentage of water, and got numbers in the neighborhood of 14, 15, 16; after 12 hours more we obtained to 18, and then another 12 hours gave us 20 and 25 percent, and then continuing the percentages of loss went up to 28, 30, and 32. Evidently there was no stopping-place, and what we were calculating as water was really in large part due to the decomposition of the honey.

Absconding of Shaken or Brushed Swarms.

Fr. Greiner is afraid of absconding. He says 20 percent turn out to be failures. During more than 20 years I formed surely several hundred brushed swarms on the old stand as well as as on new ones. Only one of them absconded, and settled like a natural swarm on a limb of a tree near by. It was a very strong colony, and I had given them one brood-comb and a very small space for brood-chamber, separated from the supers by a queen-excluder. I removed the brood-comb, enlarged the brood-chamber, and hived the swarm again, and everything went all right. Some years I had trouble from absconding of natural swarms; but with brushed swarms I never had any difficulty. Gravenhorst recommended removing the brood-comb the first day after forming the swarm. This may be true in his locality. Here I do not do it, and

Tennessee Queens.

Daughters of Select Imported Italian, Select long-tongued (Moore's), and Select, Straight 5-band Queens. Bred 3¼ miles apart, and mated to select drones. No bees owned within 2½ miles; none impure within 3, and but few within 5 miles. No disease. 30 years' experience. WARRANTED QUEENS, 75 cents each; TESTED, $1.50 each. Discount on large orders.

Contracts with dealers a specialty. Discount after July 1st

Send for circular.

JOHN M. DAVIS,
9A26t SPRING HILL, TENN.

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The Danz. Hive—
The Comb Honey Hive.

We sell it. We are authorized jobbing agents for **THE A. I. ROOT CO., for Michigan.** Send us a list of the goods you want for this season, and let us quote you prices. Beeswax wanted. Send for catalog. **H. M. HUNT & SON,**
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$12.80 For 200 Egg INCUBATOR

Perfect in construction and action. Hatches every fertile egg. Write for catalog to-day.

GEO. H. STAHL, Quincy, Ill.

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Italian Queens, by Mail.
Golden and Honey Queens before July 1

	1	6	12
Untested	$1.00	$ 5.00	$ 9.00
Tested	1.25	7.00	13.00
Breeder	4 00		
2-frame Nucleus (no queen)	2.00	11.00	21.00

Add price of any Queen wanted with Nucleus.

Our bees are shipped in light shipping-cases. Purchaser pays express on Nuclei.

Safe arrival guaranteed of all stock sent out.

BATAVIA, ILL., Aug. 21, 1901.

Dear Sir:—I thought I would let you know as to results of the nucleus sent me. They were placed in 10-frame hives and now they are in fine condition. From one I removed 24 pounds of honey and had to give 6 of them more room, as they were hanging out. They have more than reached my expectations.

Yours respectfully, E. K. MEREDITH.

DAVENPORT, IOWA, Dec. 31, 1901.

Your queens are fully up to standard. The honey queen that you sent my brother takes the lead. She had a rousing colony when put up for winter. The goldens can be handled without smoke or veil. Very truly yours,

JOHN THOEMING.

Notice.—No tested stock sent out before May 15. Send money by P. O. Money Order or Express Order. **D. J. BLOCHER,**
17Atf PEARL CITY, ILL.

Please mention Bee Journal when writing

DAIRYMEN ARE DELIGHTED to meet those who work for us. Cow keepers always have money. We start you in business. You make large profits. Easy work. We furnish capital. Send 10 cents for full line of samples and particulars.

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BEE-SUPPLIES!

ROOT'S GOODS AT ROOT'S PRICES

Everything used by bee-keepers. POUDER'S HONEY-JARS. Prompt service. Low Freight Rates. NEW CATALOG FREE.

WALTER S. POUDER.
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have no trouble. Of more importance, it seems to me, it is to have the bees filled with honey and to give to the swarm sufficient room. I give them so much room that the bees can form a cluster like a swarm.—L. Stachelhausen, in Gleanings in Bee-Culture.

Bulk Honey.

Referring to the claims of H. H. Hyde for bulk honey, Somnambulist says in the Progressive Bee-Keeper:

> With one of his assertions, my experience leads me to disagree, namely, "When the consumer buys bulk comb honey he feels sure that he is getting a pure sweet, just as the bees made it."
>
> Time after time have I been earnestly informed that the comb honey, so very attractive in itself, was surrounded by a mixture of glucose. Prospective buyers, and those not thinking of ever investing a penny in the alluring dainty, alike join forces against the innocent product, and equally innocent producer. Indeed, with this class of people section-honey is pronounced artificial honey, and consequently fraudulent.

CONVENTION NOTICE.

Illinois.—The spring meeting of the eastern part of the Northern Illinois Bee-Keepers' Association will be held at the residence of James Taylor, in Harlem, Winnebago Co., Ill., on Tuesday, May 19, 1903. All interested in bees are cordially invited to attend.

B. Kennedy, *Sec.*

Cold-Wire Fence
would not be worth as much as Page Fence to hold stock. It stretches like common fence wire.
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Wanted.
A man to help in apiary work. A good chance for one who wants practical experience in an apiary of over 200 colonies. A young man preferred. Write, giving references and wages expected. N. STAININGER, Tipton, Iowa.
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In Olden Days
men were broken on the wheel, now they buy
Electric Steel Wheels,
and save money. They fit any wagon. Made with either staggered or straight spokes. Let us tell you how to make a low down wagon with any size wheel, any width tire. Catalog tells. It's free.
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Take a Trip
over the Nickel Plate Road and be convinced of its superior train service. Solid through daily express trains between Chicago, Ft. Wayne, Findlay, Fostoria, Erie, Buffalo, New York City and Boston. American Club Meals, ranging in price from 35c. to $1.00, served in Nickel Plate dining-cars; also service a la carte. Rates always the lowest. No excess fare charged on any train on the Nickel Plate Road. Chicago depot: Harrison St. and Fifth Ave. City Ticket Offices 111 Adams St. and Auditorium Annex. John Y. Calahan, General Agent, 113 Adams St., Room 298, Chicago. 'Phone Central 2057. 2—17A5t

Tip-Top Glass Honey-Jars
The pictures shown herewith represent the best Jars for honey that we know of. They are made of the clearest flint glass, and when filled with honey, and neat labels attached, they make as handsome packages as can be imagined. The glass top rests on a flat rubber ring, and is held in place by a flat steel spring across the top as shown. They are practically air-tight, thus permitting no leak, which is an important thing with honey-sellers.

1-pound.

¾-pound.

7-ounce.

We can furnish these Jars, f.o.b. Chicago, at these prices:

	1 gross.	*2 gr.*	*4 gr.*
1-lb. Jars	$5.00	$9.50	$18.00
¾-lb. "	4.50	8.50	16.50
7-oz. "	4.00	7.50	14.50

If you try them once you will likely use no other kind of top or sealing arrangement for honey-jars.
GEORGE W. YORK & CO.
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Bee-Supplies
G. B. LEWIS CO'S GOODS and everything necessary for handling bees. The very best of goods, and largest stock in Indiana. Low freight-rates. Catalog free.
C. M. SCOTT & CO.,
1004 E. Washington Street,
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Wanted to Buy
unlimited quantities of ABSOLUTELY PURE BEESWAX. Must be nice. Best prices paid, either cash or in Supplies. Address at once,
C. M. SCOTT & CO.,
1004 E. Washington St., Indianapolis, Ind.
15Atf Please mention the Bee Journal.

65 Best Queen of Sixty-five 65
Belle Plaine, Minn, April, 1903.
Mr. Alley:—I have a queen received from you in 1900. Her bees are the best honey-gatherers of an apiary of 65 colonies in which are queens from different breeders—natural queens—as Dr. Gallup calls them. The Adel queen is the best of the lot. C. J. Oldenberg.
A Tested Adel Breeding Queen and my new book giving result of 40 years' experience in rearing queens, sent by mail for $2.00. Warranted Adel queens, each, $1.00. Safe arrival guaranteed. Send for price-list of queens and prospectus of book.
20Atf HENRY ALLEY, Wenham, Mass.

Please mention Bee Journal when writing Advertisers.

HONEY AND BEESWAX

MARKET QUOTATIONS.

Chicago, May 7.—The past winter and present spring have been a disappointment to producers and dealers in honey, in that the consumption has been away below the average of the past decade. Choice to fancy comb is held at 15@16c per pound, with off grades at 2@5c less per pound. Extracted, white, 6@7c; ambers, 6@6½c; dark, 5½@6c. Beeswax in good demand at 32c. R. A. Burnett & Co.

Albany, N. Y., Mar. 14. — Honey demand quiet; receipts and stock light. Comb selling, light, 15c; mixed, 14@15c; dark, 13@14c. Extracted, dark, at 7@7½c. Beeswax firm, 30@32c.
H. R. Wright.

Kansas City, April 20.—The supply of comb honey is about exhausted. The demand good. We quote you as follows: Fancy white comb, 24 sections, per case, $3.50; No. 1 white comb, 24 sections, $3 40; No. 2, white and amber, per case, $3.00@3.25. Extracted, white, per pound, 6@6½c; amber, 5½c. Beeswax, 25@30c.
C. C. Clemons & Co.

Cincinnati, Apr. 27.—Little demand for comb honey at present; fancy white sells at 15@16c in a small way. We quote amber extracted at 5½@6½c; white clover, 8@9c. Sales not as lively as expected this season of year. Cuban extracted is offered on all sides, and future prices are awaited with intense interest. Beeswax strong at 30c. The Fred W. Muth Co.

New York, May 8.—The market on honey is very quiet and very little doing, with more than sufficient supply on hand to meet the demand. Fancy stock of comb honey is well exhausted, while other grades are still plentiful and selling at 13 cents for No. 1, 12c for No. 2, and 11c for amber; no demand for buckwheat. Extracted remains quiet at unchanged prices. Beeswax firm at 31c.
Hildreth & Segelken.

Cincinnati, May 8.—The demand for comb honey is nearly over, but as the stock is almost exhausted, prices keep up. Fancy water-white brings 15@16c. The demand for extracted has not changed whatever, and prices are as follows: Amber in barrels, 5¼@5½c; in cans, 6@6½c; white clover, 8@8½c. Beeswax, 28@30c.
C. H. W. Weber.

San Francisco, Apr. 29.—White comb honey, 12@12½c; amber, 9@10c; dark, 7@7½c. Extracted, white, 6½@7c; light amber, 5½@6c; amber, 5@5¼c; dark, 4@4¼c. Beeswax, good to choice, light 27@29c; dark, 25@26c.

Last year's product has been tolerably well cleaned up, particularly the desirable stock. Present offerings are largely odds and ends, including little of fine quality. Values for the time being are little more than nominal. A lower range of prices is looked for on coming crop.

WANTED WHITE CLOVER EXTRACTED HONEY!
Send sample and best price delivered here; also Fancy Comb wanted in no-drip cases.
THE FRED W. MUTH CO.
32Atf Front and Walnut, Cincinnati, Ohio.

If you want the Bee-Book
That covers the whole Apicultural Field more completely than any other published, send $1.20 to
Prof. A. J. Cook, Claremont, Cal.,
—FOR HIS—
"Bee-Keeper's Guide."
Liberal Discounts to the Trade.

FREE FOR A MONTH....
If you are interested in Sheep in any way you cannot afford to be without the best Sheep Paper published in the United States.
Wool Markets and Sheep
has a hobby which is the sheep-breeder and his industry, first, foremost and all the time. Are you interested? Write to-day.
WOOL MARKETS AND SHEEP, CHICAGO, ILL.

SHEEP MONEY IS GOOD MONEY and easy to make if you work for us. We will start you in business and furnish the capital. Work light and easy. Send 10 cents for full line of samples and particulars.
DRAPER PUBLISHING CO., Chicago, Ills.

The Best Bee-Goods in the World....

are no better than those we make, and the chances are that they are not so good. If you buy of us **you will not be disappointed. We are undersold by no one.** Send for new catalog and price-list and free copy of THE AMERICAN BEE-KEEPER; in its thirteenth year; 50 cents a year; especially for beginners.

—THE—

W. T. Falconer Mfg. Co.,
JAMESTOWN, N. Y.

W. M. GERRISH, Epping, N.H., carries a full line of our goods at catalog prices. Order of him and save the freight.

A Few Cheap Smokers!

We find we have on hand a few slightly damaged Clark and Bingham Bee-Smokers, which got a little damp and soiled at the time of the fire in the building where we were about 2 years ago. They are all almost as good as new.

We have some of the Clark Cold Blast, which when new sell now at 55 cents each; some of the Large Bingham—new at 65 cents each; and some of the Little Wonder Bingham—new at 50 cents. But to close out those we have left that are slightly damaged, we will fill orders as long as they last at these prices:

Clark at 25 cents each; Little Wonder Bingham at 30 cents each; and Large Bingham at 40 cents each.

We do not mail any of these slightly damaged Smokers, but will put them in with other goods when ordered, or sell them here at our office when called for—at the above prices.

GEORGE W. YORK & CO.,
144 & 146 E. Erie Street. - CHICAGO, ILL.

Bee-Keepers, Remember

that the freight rates from Toledo are the lowest of any city in the U.S. We sell

Root's Supplies at their Factory Prices * * * * *

Poultry Supplies and Hardware Implements a specialty. Send for our free Illustrated Catalog. Honey and Beeswax wanted.

GRIGGS BROS.,
214 Jackson Avenue,
TOLEDO, OHIO.

14A13t Please mention the Bee Journal.

$300,000,000.00 A YEAR and you may have part of it if you work for us. Uncle Sam's poultry product pays that sum. Send 10c for samples and particulars. We furnish capital to start you in business. **Draper Publishing Co., Chicago, Ill.**

Special Notice to Bee-Keepers!

BOSTON

Money in Bees for You.
Catalog Price on

ROOT'S SUPPLIES

Catalog for the Asking.

F. H. FARMER,
182 Friend Street, Boston, Mass.
Up First Flight.

16A13t Please mention the Bee Journal.

26th Year Dadant's Foundation 26th Year

We guarantee Satisfaction. What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS. PATENT WEED-PROCESS SHEETING.

Why does it sell so well? Because it has always given better satisfaction than any other. Because in 25 years there have not been any complaints, but thousands of compliments.

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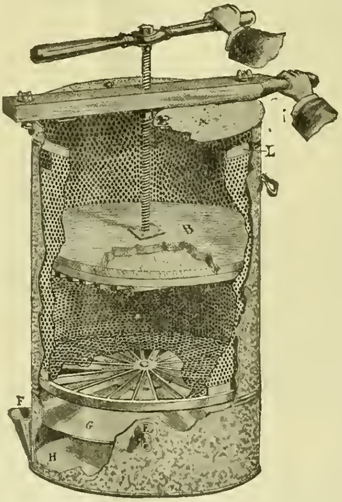

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Nat'l Bee-Keepers' Convention at Los Angeles, Aug. 18-20

COLLEGE

AMERICAN
BEE JOURNAL

43d Year. CHICAGO, ILL., MAY 21, 1903. No. 21.

WEEKLY

THE LATE MRS. A. J. BARBER.
(See page 329.)

THE AMERICAN BEE JOURNAL

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GEORGE W. YORK.

DEPT. EDITORS,
DR. C. C. MILLER, E. E. HASTY, EMMA M. WILSON

IMPORTANT NOTICES.

The Subscription Price of this Journal is $1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

The Wrapper-Label Date of this paper indicates the end of the month to which your subscription is paid. For instance, "dec03" on your label shows that it is paid to the end of December, 1903.

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2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

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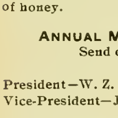
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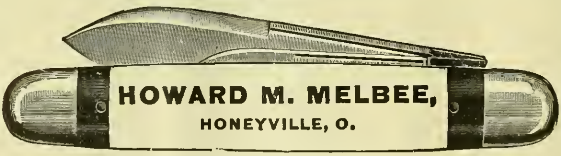
Your Name and Address on one side—Three Bees on the other side.



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How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

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BEE JOURNAL

43d YEAR. CHICAGO, ILL., MAY 21, 1903. No. 21.

Editorial Comments

Beeswax in Cuba.—A Cuban correspondent writes that 35 cents a pound for wax, as given on page 243, is rather high. He has been able to get only 31 cents for it, but that is in Spanish gold, and is equivalent to 28½ cents American money.

A New Bee-Disease, fairly wide spread, is reported in the Australasian Bee-Keeper. It has the appearance of foul brood except smell and a deficiency of ropiness. Mr. Gale, of the Agricultural College, reports that they have bred the new microbe by thousands, and are satisfied it is not foul brood.

Introducing Without Making Queenless is advised by the Modern Farmer and Busy Bee. That is, instead of first making the colony queenless, put the new queen caged in the hive, and then remove the old queen 48 hours later, when the cage is to be so arranged that the bees can liberate the new queen by eating out the candy. Well worth trying.

Emptying Barrels of Granulated Honey.—Some bee-keepers make very hard work of emptying barrels of granulated honey. We used to suffer the same way before we tried a different method. To take the head out of the barrel and dig out the solid honey is no easy job. After emptying one barrel the digger is apt to wish there were no such thing as a barrel of honey.

Our present method is to lay on the floor a sheet of heavy wrapping-paper about 3 or 4 feet square. Then put the barrel on one end in the center of the paper. The next thing is to remove the hoops, then the upper head of the barrel, after which all the staves can be taken away. The honey will then stand before the operator in an almost perfect cylinder in form. With a spade or shovel he can shovel it into a melting-tank, or into any other receptacle desired. A 200-pound barrel can thus be emptied in about 15 minutes, if quick movements are made.

Just try the above method and see if you ever want to dig honey out of a barrel again. As second-hand barrels are practically worthless, it does not pay to try to save them by spending much more time than the barrel is worth in digging out the honey.

The paper used on the floor can be cleaned off and used again, if desired. We have also used, instead of the paper, a large sheet of galvanized iron. Zinc would also be a good thing for the purpose. The edges of either zinc or galvanized iron could be turned up a little, so that if the honey were somewhat soft it would be held as in a pan.

Colonies with Virgin Queens in Early Summer need special treeatment in some cases. Generally when an old queen is superseded by the bees she continues to lay until her successor is ready to take up that duty. In that case there is no need of interference on the part of the bee-keeper. But it sometimes'happens that by some means a virgin queen is found in a hive with no brood present unless it be sealed brood, perhaps well advanced. In general, it is bad policy to take from a strong colony early in the season to give to a weak one. Here is an exception. This colony with the young queen can just as well as not be taking care of some brood from elsewhere until its own queen is laying. Take from a strong colony one or two frames of brood—the youngest you can find—and give to the broodless colony. In place of the brood taken away, put an empty comb, or combs, in the middle of the hive. A week later these will be filled with young brood and eggs, and may be given to any colony with a virgin queen.

Thus, young brood and eggs may be drawn each week so long as there is any colony with only a virgin queen, and in this way it will be seen that for any frame thus handled there will be three times as many bees as if the frame had been left untouched for its three weeks in its original place. If desired, a frame of sealed brood from the colony with the virgin may be exchanged for the frame of young brood, and in this way the strong colony will be stronger instead of weaker for the performance. In any case, the sum total of bees will be increased.

Red Bees.—Gleanings in Bee-Culture reports that Mr. Fowls found some red bees, and was nonplused to find them the next day of their original yellow color. A few days later they were again red, and it transpired that they were made red by being fed syrup from red candy that Mr. Fowls had bought at a bargain. And now Editor Root is scheming to have a show of bees of different colors, made so by feeding differently colored syrups!

Would a "red nose" on a bee indicate anything stronger than red candy syrup?

Shaken Swarms in the Arid Portions.—What is best for one region may not be best for another. In some places the chief value of shaken swarms lies in the fact of their keeping apiaries free from the evil effects of foul brood, even though it may be raging all about. Of course, that does not in the least conflict with its value as a preventive of swarming, nor with its influence with respect to the whiteness of the cappings of comb honey. For those who are located in Colorado, or similar arid regions, the following specific directions, given by the Rocky Mountain Bee Journal, will be of value:

> The honey-flora in the arid States is such as to afford a long, moderate and continuous flow, and this furnishes ideal conditions for the utilization of shook swarming in connection with the production of comb honey.
>
> Passing the question of spring management, we will presuppose that the hives are crowded with bees and brood in all stages, and that the honey-flow has well started. Both interior and exterior conditions are favorable to swarming. In fact, having noted these conditions, now is the time to begin active operations. Examine each colony carefully for queen-cells containing eggs or larvæ. Having found one that has thus given notice of its intention to swarm, proceed as follows:
>
> 1. Open the hive quietly and with as little smoke as possible. Find the comb containing the queen and set it at one side in a shady place and out of the wind.
>
> 2. Close the hive, and by drumming and smoking cause the bees to gorge themselves with honey.
>
> 3. Move the hive to the rear and place a new hive, containing only starters in the frames, on the old stand. The super, containing sections filled with full sheets of foundation, should also be in place, with a queen-excluder between it and the brood-chamber. The excluder should be removed in two or three days.
>
> 4. Shake three-fourths to seven-eighths of the bees, including the frame containing the queen, in front of the new hive, and run them in as you would a natural swarm. The queen should be caught and placed in the entrance after the bees have begun to run in. The right proportion of bees to leave with the brood depends upon the weather and must be determined by the judgment of the apiarist.
>
> 5. If increase is desired, remove the old hive containing the brood to a new stand several feet away, and insert a ripe cell, or give a laying queen. If no increase is desired, place the old hive by the new one, but at right angles to it. The next time the apiary is visited shake again, and move the old hive to the other side of the new one, but still at right angles. Repeat this process for three weeks, when all the brood will have hatched. The combs may then be disposed of to the best advantage of the apiarist, and any honey remaining in them may be extracted.
>
> Whether or not it is an advantage to put a comb of unsealed

brood in the new hive is a much mooted question, upon which the "doctors" disagree. I have always done so, and without disastrous results. For me it prevents absconding, and makes sure that no pollen will be deposited in the sections.

The new hive should be contracted according to the size of the swarm, so as to force the bulk of the bees into the super at once. Contraction will, also, discourage building of drone-comb in the brood-chamber. The best hive to use in this connection is the Heddon hive, or some other hive employing the shallow brood-chamber principle. This admits of more rational contraction, and forcing the swarm above. Before the close of the flow, or as the queen needs more room, the hive should be gradually expanded to its normal size.

Each old colony should be examined for preparations for swarming every six days until the swarming season has passed, and when found should be promptly dealt with in accordance with the foregoing directions. This gives the apiarist almost perfect control of the swarming fever. Instead of becoming an evil and a loss it becomes a blessing and a profit, as it enables the apiarist to throw a preponderance of the bees into the supers at precisely the right time to secure a crop of handsomely finished section honey.

Foul-broody colonies should be shaken at the beginning of the flow, regardless of their strength of fitness for swarming. Weak colonies may be united until their force is sufficient for business purposes.

Miscellaneous Items

Hon. Eugene Secor, the former General Manager of the National, has gone into the greenhouse business as a side line, at his home in Winnebago Co., Iowa. We notice this from a column article in his local newspaper. It says that, about two years ago, Mr. Secor advertised for a partner to start a greenhouse, being desirous of carrying out a long-cherished idea. He finally found the right man—in Illinois, of course. His name is Stitz. The newspaper says he "was raised in a greenhouse," but judging from his success he does not seem to be as "green" as the house he was "raised" in.

Their greenhouse business has developed so that they now have two, one of which is devoted to the growing of carnations, the demand for this beautiful flower having increased so rapidly that it may be necessary to use two houses for their production alone. They have all the fashionable colors of this flower, including the famous "Mrs. Lawson." They also have the McKinley and Roosevelt varieties. No mention is made of the "Woolley," which will be the purest and most beautiful of all, when once secured.

Mr. Secor is to be congratulated on his success in the floral line. Not many are so well situated financially as to gratify their desires in this inspiring line. Few earthly things are so beautiful as flowers. Of course, to the bee-keeper, the white clover, basswood, sage, the buckwheat, and some other blooms, are more to be desired than carnations, and roses, and "sich." But all have their uses, and are beautiful to look upon—bright emblems of purity, and sweetness, and truth.

The Farmers' Handy Wagon Co., of Saginaw, Mich., are anxious to obtain some farm views showing their Handy Wagon in use on the farm. They think that, among our thousands of readers, there must be a great many amateur photographers who would be only too glad to enter such a friendly contest. They offer $75 in cash to the successful contestants. By addressing the advertising department of the Farmers' Handy Wagon Co., full information as to the conditions governing the contest can be obtained. When writing, kindly mention the American Bee Journal.

Delays in Mailing Queens are very annoying, not only to the queen-breeder but to the customers as well. We had expected to be able to fill all our premium queen orders by May 15, but the weather has been so unfavorable that several of the best breeders who had agreed to furnish us queens could not do so. We regret the delay exceedingly, but of course we cannot help it. We will fill all our orders just as soon as we can possibly get the queens. We trust all who are entitled to receive queens from us will be patient.

Thought it Was a Bee.—A guide in the Maine woods was bragging the other day about his indifference to the attacks of the black flies, from which those in his party were suffering greatly. A $10 bet was made that he couldn't let the flies settle for five minutes on his bare back.

The guide stripped, and the insects came in good numbers and began to bite. He did not wince. Then one of the party got behind him, took a burning glass out of his pocket and, the sun being out, focused it on the guide's shoulder. The guide squirmed and wriggled. He stood it for some seconds, then he blurted out:

"I can stand all the black flies in Maine, but brush away that blasted bee!"

He won the bet.

Association Notes

How We Got Our Foul Brood Law.

First, we had Mr. N. E. France of Wisconsin, at the last meeting of the Chicago-Northwestern Convention, and he addressed the convention on the subject of Foul Brood and answered all questions raised by the members.

Then we said, "Let us have a foul brood law," and we went at it. We put ourselves in touch with the Illinois State Bee-Keepers' Association, which had formal charge of the matter, and corresponded with Messrs. Jas. A Stone, J. Q. Smith, Chas. Becker, and others who were engineering the Bills before the House and Senate at Springfield. Then we subscribed money, and mailed a printed appeal for funds to all our membership, and to those on the mail-list of the American Bee Journal in Illinois, besides.

The writer has the honor of a personal acquaintance with several of the honorable members of the Legislature, and he used his influence with them where he could. We were fortunate enough to discover the Hon. Henry W. Austin, of Oak Park, through Mr. C. F. Kannenberg, one of our members, and a member of the foul brood committee. Mr. Austin is a new member, a banker, and a man of affairs. He made a personal matter of our Bill from the start. He consulted with the writer a number of times about it, and when he was in Springfield to appear before the House and Senate committees, Mr. Austin introduced him to a large number of the members. He did more for us than any one else, and should be tendered a vote of thanks by the entire bee-keeping fraternity.

Our hearing before the Appropriations Committees of the Senate and House was most interesting. Pres. Smith, Secretary Stone, and Treasurer Becker, of the Illinois State Association, and the writer from Chicago, made our representation. Mr. Stone brought a hive and super, and they were opened and explained to the Senate Committee, who took great interest in them, and gave us an hour's time and full opportunity to make our case. Pres. Smith got a frame of foul brood from the State museum, and it was also exhibited and explained at length. The Senate Committee took no action at the time, and we did not know for over a month whether they favored us or not.

After our hearing before the Senate Committee, we went before the Appropriations Committee of the House. They were overwhelmed with business, and our hearts failed us at this point. The University of Illinois and Judge Tuthill took up two hours, and (it seemed to us) appropriated everything in sight ($800,000). However, our time came, and *they gave us five minutes*, and heard us, and *moved that the Committee report the Bill to the House, and recommend its passage.*

Then following the long, tedious wait of more than a month, during which time we knew nothing of our fate, and imagined the worst.

Messrs. Stone and Smith, who live near Springfield, arranged to call at the capitol every week and see some of the members, and show them that our interest was unflagging. We sent out over 800 postal cards to bee-keepers all over Illinois, urging them to do what they could to help get a law. The officers of both Associations mailed personal letters to all the members of both Senate and House. This aggregated a total of about 700 letters from this source, making a total of nearly 1500 pieces of mail transmitted in the interest of our law. Added to this is the number of letters from bee-keepers all over the State, to the Senators and Representatives, of which no estimate could be made.

The writer entered into the plan for a law at first with lots of enthusiasm and confidence of success. But, as the magnitude of the undertaking opened up in front of us it seemed more and more a hopeless task to get a bee-keeper's law in Illinois—this stronghold of politics. But here we are at the goal, having run a successful race. Not one penny has been spent for anything but ordinary legitimate expenses. I believe the combination of two Associations made an impression on the Legislature. In our letters to them we said 35,000 farmers in Illinois keeping bees are interested. These figures are from the United States Census Report. There is no doubt, in any State, if 25 bee-keepers unite their work, any needed laws can be secured.

We are under great obligations to the members of the Houses who have taken a personal interest in our Bills. We need our friends, and greatly appreciate their efforts in our behalf.

Herman F. Moore,
Chairman Foul Brood Committee,
Chicago-Northwestern Bee-Keepers' Association.

Later.—Since the above was written, the news says that the Governor has signed our Bill, so we have $2000 to spend in Illinois the next two years for bee-keeping interests.

Let us so administer our trust that the entire industry will be benefited, *and advertise it so thoroughly that the Legislature of Illinois will never fail to aid us.* H. F. M.

Convention Proceedings

Report of the Wisconsin State Convention.

BY GUS DITTMER, SEC.

The Wisconsin State Bee-Keepers' Association met in convention at Madison, at 10 a.m., Feb. 4, and the morning was spent in social intercourse. At 2 p.m. Pres. N. E. France called the meeting to order. He stated that owing to the marriage and removal from the State of Miss Ada Pickard, there was a vacancy in the office of secretary. Gus Dittmer was nominated and elected to fill the vacancy.

CO-OPERATION AMONG BEE-KEEPERS.

Pres. France, after a few introductory remarks, suggested that the subject of co-operation be taken up. Mr. Wilcox thought the subject too broad and general; that much had been said on the subject in the past, but not much accomplished, and had nothing to suggest at this time.

Pres. France stated the case of co-operation in Minnesota, and spoke particularly of the successful co-operation of the "Honey-Producers' Association" of Colorado. He thought that conditions were different here from Colorado. Many large bee-keepers there and mostly small ones here. He thought the outlook was the best in 20 years. He thinks it a very broad subject that should be taken up by the "National." However, local organizations might succeed. He called attention to the fact that Colorado and California glutted our markets before our crops were ready, and that co-operation might be the remedy. He also stated that large buyers and commission men preferred dealing with organizations for large lots rather than looking for small lots.

"Why not form a trust?"

Pres. France—We may be forced to it.

Mr. Wilcox—Educate the bee-keeper to grade his honey. Ignorance and carelessness in this is what makes low prices. The careless one would expect as much as the one who grades carefully. Co-operation would not benefit the careless ones.

Mr. Huffman asked, "How can you get around these little bee-keepers that spoil the market?" It was suggested to buy them out. "Suppose they won't sell?" They will soon find out they can't afford to stay out. Pres. France had given the subject thought, and thinks it will not come to anything within the year. The first thing necessary is education along the line of grading.

PARALYSIS AMONG BEES.

"Is there any cure for paralysis in bees? and is it contagious?"

Mr. Pierce didn't think it contagious. He had a case that he thought to be paralysis. It seemed to dwindle, though the brood seemed all rght. He cited a case where a colony had been cured with sulphur. He tried it himself by thoroughly sprinkling the bees with it, and could see no harm done, and in two weeks the disease disappeared.

Mr. Fox—My experience is that the disease disappeared by letting them alone.

Mr. Post thought that a change of queen would cure it. He found in his experience that while there were lots of brood there was a continual dwindling away until the colony "went up." He does not think it contagious, because none of the other colonies had it.

Some one, after waiting for the disease to disappear, used sulphur, and after two weeks it had all disappeared.

CAUSE OF EXCESSIVE SWARMING.

"What was the cause of the excessive swarming last season?"

The late honey-flow.

Mr. Wilcox—The question should be, What is the principal cause of swarming? I think that certain conditions bring about certain results; that hatching brood is the strongest cause. Remove the cause by removing the brood.

Mr. Rice—I never before knew bees to swarm so much and so late, and to have the swarming increase with the season.

Mr. Fox—They swarmed the worst in the hight of the honey-flow. I had 32 out' in one day. Perhaps it was caused by limited room.

Mr. Rice—I had three top stories on most of mine, and all had lots of room, and still they swarmed.

Mr. Post—I had the best improved non-swarming queens, reared for honey-gathering. They swarmed with little or lots of room. I kept them in by caging the queen, but as soon as she was released they came out.

Mr. Van Ennick—I agree with Mr. Wilcox. Remove the brood and give them lots of room before the swarming season sets in. With this management you can keep down the swarming fever and have hardly a swarm.

Mr. Post—That is all right for strong colonies, but it will not work with weak ones.

Mr. Wilcox—Yes, I have seen such cases.

Mr. Gloege—That may be the case where the queen is superseded.

Mr. Fox—I had special reference to after-swarms with lots of room.

Mr. Huffman—Better kill the queen, or remove the brood and fill with empty combs. Pay special attention to queens that don't swarm, and work along the line of rearing from them. We may have different ways of working, but insure the same result.

Mr. Fox—Will killing the queen stop swarming, Mr. Huffman?

Mr. Huffman—Yes, that is the principle.

Some discussion took place in regard to spraying trees with poison, with the intention of killing the bees. It was the general opinion that such intention could not be proven.

At this stage Pres. France read the report of his work on foul brood throughout the State. This brought about a discussion on this subject.

Vice-Pres. Huffman took the chair.

PREVENTION OF FOUL BROOD.

Mrs. Blakely—How would you prevent foul brood?

Mr. France—Keep clear of it; don't buy old comb, bees, hives, etc.

Mr. Perry—Root it out.

Mr. Huffman—Mr. Perry could root his own but not his neighbor's. Would foul brood start in an apiary without contact?

Mr. France—One in one thousand.

Mr. Pierce—Why will it not spread from yard to yard?

Mr. France thought it did spread. He cited a case where bees had been burned year after year, but still it kept appearing from neighbors' bees, not from trees where squirrels had destroyed old comb.

"Do you know that bee-trees contain foul brood?"

Mr. Fox—I think it could be carried from yard to yard, and from yard to tree and back again, by robbing. If they are not disturbed it might remain year after year, as I do not think it can be carried except by contact in robbing.

Mr. Danniher cited a case of a bee-tree where they had plenty of brood, and foul brood, and lived year after year.

Mr. Pierce—Did they live year after year in proper condition? Do you know what foul brood is?

Mr. Danniher—I do.

Others doubted it.

Mr. Huffman—Will they live and have foul brood?

Mr. France—Yes, I have known them to do so for three years.

SEALED COVERS IN WINTER.

"Should the honey-board be left sealed down when putting bees in winter quarters?"

Mr. Pierce—No, by no means, as they are all stuck up with glue, and will collect moisture.

Mr. Fox—Do you leave the honey-board off altogether?

Mr. Huffman—I do. I don't know what others do.

Mr. Fox—I use the honey-board.

Mr. Pierce—Should the cover be removed?

Mr. Fox—Yes.

Mr. Wilcox—Yes, I should have ventilation.

Mr. Pierce—In a moist cellar it would be worse.

Some discussion took place as to the merits of oilcloth. It appeared that nine were in favor and seven against.

Mr. Wilcox raised the point that you must use the queen-excluder to keep the queen out of the super.

"Will you get more honey by using them?"

Mr. Wilcox—You will not get more honey, but you will get rid of all annoyance.

Do you use a bee-space between the brood-frames and honey-board? Yes, always.

Which do you prefer, wood and zinc, or all-zinc? I prefer the wood and zinc; all-zinc warps.

Are you ever troubled by the queen going through the zinc? I have had them go through the perforated zinc, but it happens very seldom.

Mr. Minnich said he preferred all-zinc, as the bees would close the perforations in wood-zinc, but would not do so in all-zinc.

Mr. Huffman—All-zinc is good enough for me. I put the zinc flat on top of the brood-frames, and have a bee-space on top.

Mr. Pierce—It is just as easy to keep the perforations in wood-zinc clear as in all-zinc. Keep them clear by scraping.

Mr. Wilcox—I use a piece of a sickle to scrape any part of the hive.

Mr. Fox—I use a painter's scraper; this is a very good tool for general purposes.

Mr. France, at this time, spoke of Mr. Danniher as the oldest member, and of his faithfulness in attending the conventions year after year. On motion of Mr. France, Mr. Danniher was declared a life member by a unanimous vote.

FEEDING BEES IN WINTER.

"What is the best way to feed for winter?"

Mr. Fox, in answer to the question, read the following clipping from a journal:

"To feed bees in winter, purchase about 5 pounds to the colony of the best granulated sugar, and pour just enough boiling water on it to dissolve all of it into a thick syrup. Boil the syrup, being careful not to let it burn, until it will harden by putting a drop into cold water; then pour it into a dish or bread-pan, stirring it as it cools, and moulding it into cakes, which will weigh 5 or 6 pounds each. Remove the cover and place one of these cakes directly over the cluster, first placing three or four sticks of about one-half inch thickness across the frames to rest on. Cover all up carefully with a heavy cloth—a grain-sack is good. Over this place four or five thicknesses of newspaper, tucked in closely, and your bees will need no further attention until spring, so far as feed is concerned. In the spring, if there are any of the sugar-cakes left, melt them up and feed in the form of thin syrup to stimulate brood-rearing. Do not be in too big a hurry about feeding them the syrup, but be sure spring is here and the bees can fly every day before you commence this."

Mr. Minnich said he had tried this without success, as the syrup granulated.

Mr. Pierce—It will not do so if it is fed early enough.

"Will it not disturb the bees?"

It will not disturb them much. I have good success in putting frames of honey under the quilt on top of the frames.

Mr. Fox—While I do not advocate disturbing bees in winter, I believe it necessary to do so if needful. Besides, I do not think it will hurt them as much as is generally supposed.

Mr. Fox spoke of moving bees in winter successfully.

Mr. Wilcox—You may hear a different story in the spring.

Mr. France spoke of a case of moving bees in the winter in which the result was fatal.

ALFALFA AS A HONEY-PLANT.

"How long after alfalfa has been sown on land which has not grown it before will it yield honey?"

Mr. Moe said he had tried it and it had never yielded.

Mr. Adair—I don't think it will yield this side of the Mississippi River.

Mr. Huffman—I don't think it ever succeeds except in the dry Western section of the country, and I believe that rain is detrimental to it as a honey-plant.

Mr. Pierce said that in Illinois it would not yield unless the soil was inoculated with soil from fields where alfalfa had been successfully raised. He found, from conversation with a Kansas bee-keeper, that in that State it blooms the first season, and that the bees work on it at any time when in bloom.

Mr. Huffman—It will not yield if cut for hay.

Mr. Danniher saw a field near Madison in bloom all through the season, and the bees worked on it all the time while in blossom.

Mr. France found that everything seemed to be favorable for alfalfa around Fond du Lac, and that conditions seemed to be equally favorable in other parts.

CONVENTION EXHIBITS—TRANSFERRING BEES.

"Why are the exhibits of honey so small at our conventions?"

Mr. France—A few years ago, when premiums were offered, the exhibits were plenty. Since the premiums were discontinued we have no exhibits.

Mr. Fox—The members should take a personal interest in the matter, and bring exhibits without pecuniary inducement.

Mr. Huffman—If we take enough personal interest in the matter there would be plenty of exhibits, but we don't. What we want to do is to catch members, and to catch fish you must use bait.

Mr. Fox—If it is policy to offer premiums we should offer them.

Mr. Moe—Did our vice-president mean what he said, or was he simply preaching? Why did he not bring an exhibit?

"What is the best, or a good method of forcing a colony from a box-hive?"

Mr. Fox—Knock off one side of the hive, and take out the bees, combs, etc. Fit the old combs into new frames, and put into the new hive; the bees will fasten them at once.

Mr. Huffman—Have you ever tried putting an empty hive on top of the old, and drive the bees into the new hive? It is quite a job to fasten the old combs into frames.

Mr. Fox—I have tried it, but without success. It is not difficult to fit the old comb into the frames, and in two or three days they are fastened.

Mr. Wilcox—My method is to place an empty box on top of the old hive, then hammer the old hive for about 15 minutes, when the swarm will be in the box on top. They are then hived the same as a swarm. The drumming is repeated after 21 days, to get all the young bees out. I don't care for the old comb.

Mr. Danniher—I have tried both, and prefer drumming.

At 6 p.m., on motion, the convention adjourned until 8 a.m., Feb. 5.

(Concluded next week.)

Contributed Articles

Management in Producing Extracted Honey.

BY C. P. DADANT.

Mr. C. P. Dadant—I would like to ask a question or two, if it is not too presuming. I think I have read in some of the bee-papers that you leave your honey on the hive till fall, and then extract all of it at once. Now, I have plenty of foundation to give to the bees, and I could just as well give them plenty of room and not extract till fall. I wish to ask your advice on that. Would it not be better to extract the white clover and keep it separate? Does not the honey get so thick that it is hard to throw it out.

Another thing: I have been thinking, that when the honey-flow starts, and somewhere near swarming-time, I would go out to the apiary and take all the brood from the bees, and bring it home, and either made nuclei or give it to bees with a this-year's queen, to run for comb honey. Would it be advisable to take all their brood so as to prevent their swarming?

One thing more: Is it advisable to tier up 3 and 4 stories high in 8 and 10 frame hives, Langstroth size? A. L. Dupray.

Clinton Co., Iowa.

We do not leave the honey on the hives till fall, but till the season is over. We proceed as follows:

Just as soon as the crop opens, we place our extracting supers on the hives, usually one super to each colony. If the outlook is very promising, and some colonies extra-strong, we give these two supers. Of course the combs are already built in these, and all that the bees have to do is to store the honey. If our supply of supers and combs proves insufficient before the crop is at an end, we often resort to equalizing. By this we mean that we take combs from supers that are full and exchange them for empty combs taken from the supers of the poorer colonies which have been unable to fill theirs; for the colonies are not equally productive, some colonies filling two or three supers while others only begin to carry honey into their super. By this equalizing we secure a greater amount of filled supers, and save handling any empty combs when the extracting is done.

Just as soon as the clover crop is fairly over, we begin extracting. We never leave the supers on with clover honey in them for the fall crop, unless the amount of honey harvested is so scanty as to make it unprofitable to extract. The mixing of two grades, clover and fall honey, is objectionable, unless the honey is very thoroughly mixed. When it is extracted at the same time, it is apt to make streaks of different shades and is not so nice as if uniform. Yet we must say that a mixture of clover and fall honey—knotweed, heartsease and Spanish-needle—makes a very salable article, if the different grades are thoroughly mixed, and we have often made such a mixture to satisfy fastidious customers, but the honey must be heated and stirred to mix properly, and it requires great care not to spoil its flavor in heating.

As a rule it is much the best to harvest each grade separately, and so we aim to extract at least twice a year, once in July and the second time in September.

As to the honey getting too thick, there is but little danger of that, and we much prefer to have it a little too thick than too watery as it is sometimes, especially the first crop, when it contains any basswood. Basswood honey has always given us the greatest trouble to secure it sufficiently ripened, even if left on the hives quite a while after the end of the harvest.

We say that we always extract at the end of the crop, but there are no rules without exceptions. We have had seasons when it would have been out of the question to keep the bees supplied with sufficient room, had we not taken the honey off two, three, and even as many as five times during one crop. But such seasons are rare. Yet we must be prepared for them. The more scarce they are, the more important it is to take advantage of the good luck.

We have often tierred up three supers, one on top of another, and our supers are large, containing from 55 to 65 pounds each. We have rarely put more than three of them on top of one hive. We do not believe there is any objection to tiering up still more, only with a narrow hive like the 8-frame Langstroth, one must be very careful how they are placed. The least slant to one side or the other would perhaps cause the hive to tip, as the weight of the honey would increase the settling to the lower side. We have no use for the 8-frame hive, even for comb honey production. The 10-frame hive is small enough.

If the honey of the fall crop is left on the hive till November, it may become thick enough to be inconvenient to extract. As a rule it is much the best to extract the crop, just as the harvest ends. By this method we not only secure as ripe honey as can be had, but we also save a great deal of labor, by doing the work all at one time.

Some apiarists find it convenient to haul the supers home from an out-apiary to do the extracting at leisure. We do not like this method. We extract on the spot, and return the supers to the hives at once. Whatever may be said in favor of the method of taking the combs home, our method is more expeditious and more economical.

Regarding the removal of the brood to prevent swarming, we would not recommend it. This method at best would only prevent the issue of a part of the natural swarms, but the apiarist would have to make artificial increase with this brood, or cause swarming with the colonies to which it would be given. It would be a great deal of of labor, would entail some risk, and would hardly answer its purpose.

If an apiary is properly conducted for extracted honey with large hives, and a plentiful supply of supers filled with combs, there will be very little swarming, and it will not prove necessary to take any measures to prevent it. Ordinarily such measures would be useless, or worse than useless. A colony which is at all times supplied with a large quantity of empty combs, will make no preparations for swarming, unless it is in an uncomfortable position, exposed to the sun, or with too little ventilation, or with too many drones. Neither will such a colony produce much wax. I have seen it often stated that the bees produce wax independently of their will. The quantity thus produced is very small. It is only when they are compelled to remain full of honey for hours and days that the small scales of wax are produced, seemingly owing to the prolonged holding of a surplus of honey within their sac. When the colony swarms, each bee takes a load, and as they find no combs in their new abode they are compelled to carry this load until a part of it has been changed to wax. The bee which finds room to unload her honey-sac as soon as she arrives home, produces only a minimum of wax. That is one reason why the production of extracted honey is so great when a full supply of combs is furnished to the colony.

Hancock Co., Ill.

* * *

The Premiums offered this week are well worth working for. Look at them.

Putting Unfinished Comb Honey on the Market.

BY FRANK COVERDALE.

As I was listening with interest to the discussion which took place at the Chicago convention, Pres. York said that he had received honey in the comb only half filled and half capped. This should never be. Is not a nice comb, that fills a section, after being extracted, worth at least 6 cents? And is not the honey, after being extracted, a lighter color, and also a first-class honey for table use?

Besides, those sections of nice combs, which are left over, are a power to get all the colonies into the supers at the earliest possible date—a thing of as much moment to every comb-honey producer as "money in the bank."

There surely ought to be no honey sent to market until it is finished; it not only hurts the trade in general, but he or she who ships it will suffer more or less in future dealings. When I sell to a firm once I want to sell to it again. And, by the way, all my shipments have gone to one firm for the last 5 or 6 years, at satisfactory prices. Such a state of affairs is very satisfactory to me, and should be to every producer of this most healthful sweet. I have seen a great deal of dissatisfaction come to light along this line.

I am sorry to say that it is very hard to get honey put up well enough so that it will do to stamp a *good* name on it. However, I never stamp my name on my cases, because I sell direct to the wholesale house, in car-lots, and the firm, somehow, never forgets me.

If I wished a greater number of little orders, I would put my name on every case. Suppose I should case with several half-filled, half-capped sections, which on reaching its destination would be sold at 20 cents per section, would it not be embarassing for the grocer? Through that honey the grocer would either gain custom or lose it.

Let me emphasize in strongest terms that it does not pay to ship this kind of honey to any market, at any price. I have tried it, but never had a chance the second time, so I have come to the conclusion that it is better to extract all this kind of honey, except that which I sell at home.

Selling honey at home, at a lower price, will soon gain trade similar to that of extracted honey. Still, as the price is nearly up to finished combs, better extract them, selling to this trade only inferior-shaped combs, and at a lower price.

Jackson Co., Iowa.

Growing Timber in Germany—Lumber for Hives and Other Supplies.

BY F. GREINER.

Perhaps every observer is aware that the destruction of the pine forests is going on at a rapid rate. The gravity of the situation is not fully recognized by the general public, for no new tracts of timber are being planted.

In European countries a regular system of forestry is practiced. The large estates have their timberlands divided into a certain number of squares. When one is cleared off another is planted. The thinning-out process goes on from the time the pine seedlings are large enough to answer for bean-poles, till the trees have reached a diameter of one foot or more. Thus the country produces what timber is needed. We, in America, have not yet arrived at this point. We keep slashing into the timber, right and left, with no regard to consequences. It is not impossible or improbable that, in the future—how near, is a speculation—we may have to resort to other materials for hive-making. We are not entirely dependent upon pine lumber for our hives and supplies; if it should come to the worst, we could use clay, plaster of Paris, brick, straw or paper-pulp; but it would be well for us to look the matter squarely in the face, and be more economical with the material on hand. Quantities of good material are annually burned up, which might be saved.

Pine lumber is not the only kind suitable for our use. In fact, basswood timber has already taken the place wherever practicable, as, for instance, in manufacturing sections, shipping-cases, inside fixtures, etc.; but the supply of basswood will, in all probability, hold out no longer than the pine. Other timbers that come in for our consideration, are whitewood, chestnut, butternut, cedar, and probably other timber. Whitewood might be used for hive-bodies; it answers well, and could be used for all inside work except perhaps for the top-bars of brood-frames. No other timber answers as well as white pine, although basswood is used by a few.

I have used a great deal of chestnut lumber, such as was cut from large trees and which was full of little pin-holes. It can generally be bought for less than pine lumber, and may be used for hive-stands, shipping-cases, section-holders, frame-stuff, etc. It is, however, not suitable for hive-bodies on account of its tendency to warp. It is even worse than basswood in this respect. I believe hives that are not exposed to the weather, as those in house-apiaries, may be made of basswood or any other kind of wood without giving any trouble. Butternut answers all purposes where chestnut would. I have used these timbers largely for many years.

A few years ago I bought a large pile of slabs. It consisted mostly of chestnut. I bought it with a view of using it for the kitchen stove, and I enjoyed the fun, that winter, of reducing these slabs—there were 27 two-horse loads—to stovewood, with the help of a good, sharp bucksaw. Whenever I came to a nice, heavy piece of clear stuff three feet or more long, it was cut out and saved. I have not only used this material for honey-cases, frame-stuff, etc., but also for potato-crates, and I have still a supply left to draw on. It was the cheapest timber and wood I ever bought. The whole lot cost me but $5.00. A great deal of such material could be saved and utilized by the bee-keepers, especially by those who make their own supplies.

Ontario Co., N. Y.

Foul-Brood Legislation in California.

BY HON. J. M. HAMBAUGH.

AMONG the very first bills introduced into the California Legislature in January was one with the following title:

An Act—To amend an act entitled an act to promote the apicultural interests of the State of California by providing county inspectors of apiaries, and defining their duties, and providing for their compensation, and repealing an Act entitled, "An act to authorize the board of supervisors of the several counties of this State to appoint inspectors of apiaries, and provide for their compensation, and defining their duties, and for the further protection of bee-culture," approved March 13, 1883, said first-named act having been approved February 20, 1901, and adding five new sections, seven, eight, nine ten and eleven, providing for making the violation of certain sections thereof a misdemeanor.

Senator Ward and Assemblyman Burgess, both of San-Diego Co., introduced the bill simultaneously in both houses, and they made rapid headway, reaching the Governor among the very first, to claim his signature. All honor to them, and thanks to all in our legislative halls who so generously contributed to the needs of the suffering bee-keepers, with their influence and votes. Many thanks also, to those wide-awake officers and members of the California State Bee-Keepers' Association, University Farmers' Club Institute, California Central Bee-Keepers, etc., especially our good friend Prof. Cook, who so ably and generously championed the cause of the bee-keepers, and while, in our individual estimation, it does not meet every requirement, we believe we now have upon our statutes the best foul-brood law on the continent of America. It will be noticed the last five sections and the amendment to the fourth sections were enacted at this session of the Legislature.

CALIFORNIA'S NEW FOUL BROOD LAW.

SEC. 1.—Whenever a petition is presented to the board of supervisors of any county, signed by ten or more persons, each of whom is a property-holder, resident of the county, and possessor of an apiary or place where bees are kept, stating that certain or all apiaries within the county were affected with the disease known as foul brood, or any other disease which is infectious or contagious in its nature, and injurious to the bees, their eggs, or larvæ, and praying that an inspector be appointed by them, whose duty it shall be to supervise the treatment of said bees and apiaries as herein provided, the board of supervisors shall, within twenty days thereafter, appoint a suitable person, who shall be a skilled bee-keeper, inspector of apiaries. Upon petition of ten persons, each of whom is a resident property-holder, and possessor of an apiary, the board of supervisors may remove said inspector for cause after a hearing of the petition.

SEC. 2.—It shall be the duty of the inspector of each county to cause an inspection to be made, when he deems it necessary, of any or every apiary or other place within his jurisdiction in which bees are kept; and, if found infected with foul brood, or any other infectious or contagious disease injurious to the bees, or their eggs or larvæ, he shall notify the owner or owners, person or persons, in charge, or in possession of said apiaries or places where bees are kept, that the same are infected with foul brood or any other disease infectious or contagious in its nature, and injurious to bees, their eggs, or larvæ, and he shall require such person or persons to eradicate and remove such disease or cause of contagion, within a certain time to be specified.

Said notice may be served upon the person or persons or either of them, owning or having charge or having possession of such infected apiaries or places where bees are kept, by any inspector, or by any person deputized by the said inspector for that purpose, or they may be served in the same manner as a summons in a civil action. Any and all such apiaries, or places where bees are kept, found infected with foul brood or any other infectious or contagious disease, are hereby adjudged and declared to be a public nuisance; and whenever any such nuisance shall exist at any place within his jurisdiction, or on the property of any non-resident or on any property the owner or owners of which can not be found by the inspector after diligent search, within the county or upon the property of any owner or owners, upon whom notice aforesaid has been served, and who shall refuse or neglect to abate the same within the time specified, it shall be the duty of the inspector to abate the nuisance—either by treating the disease or by destroying the infected hives, together with their combs and bees therein.

The expense thereof shall be a county charge, and the board of supervisors shall allow and pay the same out of the general fund of the county.

SEC. 3.—It shall be the duty of the county inspector of apiaries to keep a record of his official acts and doing, and make a monthly report thereof to the board of supervisors; and the board of supervisors may withhold warrants for salary of said inspector until such time as said report is made.

SEC. 4.—The salary of the county inspector of apiaries shall be four dollars per day when actually engaged in the performance of his duties, and itemized necessary traveling expenses incurred in the performance of his duties, as prescribed in this act.

SEC. 7—The inspector of apiaries may, in his discretion, order the owner or owners, or other persons in charge of bees kept in box or other immovable or stationary comb hives in apiaries infected with foul brood or any other infectious or contagious disease, or within a radius of three miles of such diseased apiaries, to transfer such bees to movable-frame hives within a reasonable time to be specified in such order or notice; and in default of such transfer by owner or owners, or other person in charge of such bees, the inspector may destroy or cause to be destroyed all such hives, together with their contents, and the expense thereof shall be a county charge, as provided in section two of this act.

SEC. 8.—Any person or persons who shall import bees into the State of California, which said bees are not accompanied with a certificate from a duly authorized inspector of apiaries, or bee-inspector, certifying that such bees are free from foul brood and other infectious or contagious diseases, or who shall import bees from another county within this State not having a bee-inspector, into a county having a bee-inspector, shall immediately, upon receipt of such bees, cause them to be inspected by a duly authorized inspector of apiaries; and if such bees are found to be infected with foul brood or other infectious or contagious disease, such inspector shall proceed to have such disease eradicated, as provided in section two of this act. Any person violating the provisions of this section shall be deemed guilty of a misdemeanor.

SEC. 9.—It shall be unlawful for any person owning or controlling bees within this State, which are known to be infected with foul brood, or other infectious or contagious disease, to remove said bees to a new location, without first giving ten days' notice to the county inspector of apiaries, stating when and where he intends moving said bees. Any person violating the provisions of this section shall be deemed guilty of a misdemeanor.

SEC. 10.—Any person or persons whose apiary is infected with foul brood or any other infectious or contagious disease, and who sells or offers for sale from such infected apiary any bees, hives, bee-fixtures, or appurtenances, or who shall expose in his bee-yard or elsewhere any infected comb honey, beeswax, or other infected thing, or who conceals the fact that his apiary is so infected, shall be deemed guilty of a misdemeanor.

SEC. 11.—Any person or persons who shall resist, impede, or hinder in any way the inspector of apiaries in the discharge of his duties under the provisions of this act shall be deemed guilty of a misdemeanor.

SEC. 12.—This act shall take effect immediately.

Our Wood Binder (or Holder) is made to take all the copies of the American Bee Journal for a year. It is sent by mail for 20 cents. Full directions accompany. The Bee Journals can be inserted as soon as they are received, and thus preserved for future reference. Upon receipt of $1.00 for your Bee Journal subscription *a full year in advance*, we will mail you a Wood Binder free—if you will mention it.

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Amerikanische Bienenzucht, by Hans Buschbauer, is a bee-keeper's handbook of 138 pages, which is just what our German friends will want. It is fully illustrated, and neatly bound in cloth. Price, postpaid, $1.00; or with the American Bee Journal one year—both for $1.75. Address all orders to this office.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Death of Mrs. A. J. Barber.

Mrs. A. J. Barber died at her home in Montezuma Co., Colo., March 24. Her loss will be regretted not only by Colorado bee-keepers, but by thousands of others.

In its last issue, the Rocky Mountain Bee Journal had this to say of our departed sister:

"Mrs. Barber was well known to the bee-keeping fraternity, not only of her own State, but of the United States. In her experience as an apiarist, she had evolved some original ideas of great value to bee-keepers, which she freely imparted to the craft whenever the opportunity presented. She conducted several large apiaries, being the most extensive woman bee-keeper in Colorado, and, perhaps, in the world.

"She was a pioneer of the early days of southwestern Colorado—days when the gore-thirsty Ute was never off the war-path. Her first husband was killed many years ago in an unequal battle with that tribe. She is spoken of by those who knew her familiarly, as a remarkable woman—naturally refined, sympathetic, and kind, yet, when occasion demanded, could be as brave as any heroine of fiction. Notwithstanding nearly her whole life was lived amid the turmoil, hardships, and meager advantages of the Western frontier, she acquired a splendid education, and was always recognized for her superior intelligence and modest worth."

Spring Feeding of Bees.

1. A colony has stood on the summer stand all winter, and is strong and apparently healthy. If, on opening the hive on a warm, pleasant day in early spring, it is found to be quite damp, drops of water standing thickly on the walls, what better thing could be done than to lift the cover and let the sun shine directly on the pad for an hour or so in the middle of the day?

2. In "Bees and Honey," by Newman, in reference to spring feeding, we find this: "If there are no other bees in the neighborhood, the food can be given in shallow pans and placed in the noonday sun, at some distance from the bees." Do you advise this as a safe way of feeding a small apiary, *provided* all colonies are reasonably strong, and no other bees nearer than a mile?

(Perhaps I can aid you to give a clearer answer in regard to this particular case, by stating that my bee-pasture lies principally north of my apiary, while to the south there is practically no bee-pasture for a mile; then there is an apiary at least twice as large as mine; then a little farther south there is fine pasture.)

3. If a safe plan, how far from the hives should the food be placed?

4. How much per colony should be given, and how often?

5. Would not a bowl or can inverted on a plate, or some such thing, be better than an open shallow pan for such feeding?

6. Bees began gathering pollen early in April, and bloom was coming rapidly, when, on April 28 and 29, we had a cold wave, ice and snow, so all bloom is destroyed and no more expected till about the last of May. All colonies are strong, but there is not much honey in the hives. Under these circumstances am I not obliged to feed in order to be ready for early June alfalfa bloom?

I am a beginner, and have the whole business to learn, and while I am at it I want to learn it *right*.

Decatur Co., Kans., May 2. Auntie Bee.

Answers.—1. The condition you mention is one likely to arise with any strong colony, especially if the entrance be somewhat contracted, and need occasion no alarm; but your idea of drying it out with the sun is all right.

2. It depends upon circumstances whether the plan is good. It seems more like getting forage from the fields than feeding in the hive, but the strongest colonies get the most. If other bees are within a mile, some watching would be needed to see whether they get a start. Even at a greater distance they might sometimes carry off some of the feed, for bees have been known to forage more than two or three miles from home.

3. The distance is not important. Five, ten, twenty, or more rods, just as it suits your convenience.

4. Half a pint to a pint daily would not be out of the way. But you should not give enough to have the combs clogged so the queen will not have room to lay, and it is not well to feed except when the weather is favorable for bees flying.

5. Yes, and no. Yes, if the can or bowl be large enough to give sufficient standing room for the bees; otherwise no.

6. Surely, if colonies are strong you should keep them strong, and in order to do that they must have plenty of honey to draw on. It takes *lots* of honey, more than most people suppose, to keep up the amount of brood-rearing that is needed for good, strong colonies; and anything that curtails the brood-rearing at this critical time is most disastrous to your future honey crop. By all means feed if they need it. I hope you may find yourself mistaken, and that all bloom may not be destroyed so that you will not have any until June; but if that is true, then frequent feeding to stimulate your colonies is what you need.

Honey in Bread.

"What nice bread this is! Mr. John's baker's bread is it not?" "No, I make all my own bread." "What yeast do you use?" "A half-cupful of honey, a pinch of tartaric acid, a little flour, and some water. I prefer dark honey for it." "Well, I would not wish for better bread." In the dry weather bread made with honey yeast does not get so dry as bread made with other yeast. In the United States the large bakers are among the greatest honey-buyers.—Australian Bee-Bulletin.

The last sentence of the above would indicate that in the United States a large amount of honey was used in bread-making, which is rather doubtful. It is true that large amounts of honey are bought by bakers, but used chiefly, I think, in making honey-jumbles and things of like nature.

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

LONGING FOR HUM.

O for the hum of some bees in the skies!
O for some summer, O for some flies!

(Loud cries of, "Put him out!")

CUBAN HONEY IN THE UNITED STATES.

Shall we let Cuban honey in cheaper because our brethren are there producing it? It was not with that expectation that they went to Cuba, I reckon. As people make their beds so they must lie on them, as a general thing. If they are true Americans they don't want to take the position of holding out hands for alms. Of localities capable of producing floods of cheap honey, 'spects we are carrying enough already. Page 227.

FORMALDEHYDE, FORMALIN, ETC.

As to formaldehyde vapor, what we want now is not more chin-music on the rondo, "It's reliable—It's unreliable—Nobody knows yet," but answers to square questions, "How can I get it? How shall I use it? What does it cost? What sort of stuff is it, anyway?" Some simple inventions and *pictures* of them, are just nicely in order, that we may try it without bungling, and without that waste of time which we usually incur when getting into something totally new. And let some of the first users give us their actual adventures—not too briefly. A sort of clandestine article, formaldehyde is, I believe—more largely used in doing wrong than in doing right—and by users who don't want the fact of their using it known. Perchance that circumstance may make us more or less annoyance and bother.

We read of both formaldehyde and formalin; what's the relation of those two things—or terms? Seems to me some writers simply say "formal," and let it go at that. We would be glad to see these confusing words "form a line." O for a chemist to give us a learned and earnest talk—at the end of which we comprehend less of the matter than before! (More cries of, "Put him out!") Page 227.

DEATH OF DR. GALLUP.

I failed to notice the death of Dr. Gallup when the number containing it arrived, and it just comes to me as a sudden sadness. Had hoped that it was a false alarm when he wrote that he was sick and not expected to get well. Not he that is to write "A Hundred Years Among the Bees," alas! Still, the Book prophesies of a time when a *child* shall die a hundred years old. Page 259.

PICKLED BROOD NOT CONTAGIOUS.

I hope Mr. France was right at the Northwestern, in assuring us that pickled brood is not catching. Nevertheless, the man who looks a little out for it is still pardonable. Suppose we should say, "Communicable, but good colonies in favorable condition invulnerable to the contagion." Would not that agree with what we know of the matter at present? Page 228.

THE LONG-TONGUED BEE.

Surprised if the long-tongued bee has become a back number already. She was called for at the Northwestern, and no long-tongued advocate stood up for her. So quickly done for—what begun for? Page 228.

LARGE SPACE OVER THE SECTIONS.

And the staid and reliable Mr. Baldridge can be queer when he tries, it seems. Likes to have a two-inch space over his sections built full of higglety-pigglety comb and honey. Notifies one that the bees need more room. Sure! But most of us would prefer to be notified in a less strenuous manner. Page 228.

BEES AND FRUIT-BLOOM POLLINATION.

Yes, the remark was loudly made that covering bloom prevented pollen being carried by currents of air. We still didn't know for *sure* whether lack of bees or lack of natural conditions caused the failure of fruit-setting. To some extent I guess we shall have to say so still; but Prof. Cook, on page 229, makes a vigorous foray into that idea. Bees admitted just momentarily, and marks put on the flowers they visit—just those blooms and no others developing fruit. Conclusive as to the excellence of bee-work; but even that does not quite cut off the idea that the sterility of the other blooms was caused by their being covered up. All the same, the seven items at the close constitute excellent "gospel" on the subject.

BEE-NURSES AND BEE-BABIES.

Hello! Here on page 230 a new question bobs up. Does each bee-nurse about supply one bee-baby, or more than one? Answered tentatively for more than one. May be it's all right; but, see here once: To rear even one bee-baby the nurse must in about six days provide an amount of food considerably exceeding her own weight. Isn't that doing pretty well—wonderfully well? Just at present I guess we had better make the question broader. Let it run: Does each nurse supply several babies, or does each baby employ several nurses?

LATER.—The mathematical state of the case is dead against me. If it took two nurses for one larva the whole nursing time of a bee (16 days) would suffice to rear less than two young bees, *and the colony would never get ahead any*. This is anent the excellent article of Arthur C. Miller.

Honey as a Health-Food is the name of a 16-page leaflet (3½x6 inches) which is designed to help increase the demand and sale of honey. The first part is devoted to a consideration of "Honey as Food," written by Dr. C. C. Miller. The last part contains "Honey-Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by every one who has honey for sale. It is almost certain to make good customers for honey. We know, for we are using it ourselves.

PRICES, prepaid—Sample for 2 cts.; 10 for 10 cts.; 25 for 20 cts.; 50 for 35 cts.; 100 for 65 cts.; 250 for $1.50; 500 for $2.75; 1000 for $5.00. If you wish your business card printed at the bottom of the front page, add 25 cts. to your order.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Rearing Queens.

I tried to rear some queens by the plan given by Mr. L. Stachelhausen, page 150, and failed.

I prepared the colony as he directed, and gave the strips about an hour after the separation—that was Tuesday about 1 p.m. Thursday noon I looked in and there was not a cell started, and every larva was gone. So I gave some more (two pieces about 8 inches long) and at the same time put in 5 cell-cups and grafted them (I had no royal jelly). Friday noon they had built out 4 of the cups and had started one cell on the strips. All the other larvæ in the strips are gone.

In shoving down the cells on the strips I think I cut a little more than half way, that is, cut off more than half the depth of the cell. What do you think is the reason they would not start cells on the strips? Would cutting off the comb too deep make any difference? I used larvæ that were just hatched, and the cell-cup they did not accept was the youngest larva I transferred. Of course what I transferred was older.

I am going to try again, as I believe it is a good plan. Any information will be thankfully received. TEXAS.

ANSWER.—It is very hard to tell just why it is that bees fail to do as we wish about starting queen-cells, especially when one has only a written description. The most experienced do not invariably make a success, and in most cases it is quite likely they do not know the exact cause of failure. Your greater success upon second trial is your warrant for believing that you will continue to improve. It is the common experience. Cutting down the cells a little more or a little less than half way would hardly be the cause of failure. "If at first you don't succeed, try, try again."

Facing Hives—Old and Moldy Combs.

I had eight colonies of bees last fall and wintered them out-doors packed thoroughly in leaves, and roofed, 4 together, facing south and 4 facing east, each packed the same. Those facing south came out strong and fine, while of the 4 facing east 2 were queenless, and all had many dead bees and the combs more or less moldy, though with plenty of honey. I have combined three colonies and faced them south.

1. Was this in consequence of their facing east?

2. Can I use those or other old combs to hive swarms on, or would they be better melted down? They nearly all have some honey and some pollen and mold, but are good, straight combs, and I dislike melting them if the bees will take them. ILLINOIS.

ANSWERS.—1. I don't know, but the facing east may have something to do with it. A day might come warm enough to start flying in the afternoon those facing south, without starting out those facing east. Quite likely, however, there were reasons for poor wintering aside from the facing east.

2. Don't for a minute think of melting up those combs. Put them in a lower story under strong colonies for the bees to take care of, and then use them when wanted for new colonies or swarms.

Weak or Perhaps Queenless.

What is the matter with one of my colonies? I caught it late last fall. It did not gather enough honey to keep it over winter, and so I had to feed it about the middle of March. It does not clean out the mold and dead bees since I put them out of the cellar this spring, and it does not gather pollen, as my other colonies do. MINNESOTA.

ANSWER.—Hard to tell what is the trouble without looking in the hive. Very likely the only trouble is that they are weak. It is possible, however, that they may be queenless. Lift out the frames and see if they have any eggs or brood. If not, unite with other colonies.

Trouble Over a Bee-Tree.

I want to write to you about a bee-tree which I have found, and the owner of it will not let me cut it. How can I get the bees, etc?

1. Has he a right to the bees and honey which the tree contains?

2. I agreed to grub the tree, and work it from the land, and the owner to pay me so much a cord for the wood; the grubbing of the tree I would do for nothing. The owner said, "No, we will let it stand until fall and divide the honey, and then you can have the bees." I said, "Then you can have the bees, too." He laughed at me.

3. The tree is not worth 10 cents to either of us, if we wanted to buy it, as it is rotten from top to root. No, I would not give one copper cent for the tree as far as the wood is concerned. Why, they burn wood by the trainload in order to open land. Why not burn this one?

Simply because he wants to get the honey, when the law says he cannot touch the bees or the honey, as I am the finder and no one else.

Why not have a bee-tree law? IOWA.

ANSWER.—I don't know the law in your State; one of your justices or lawyers could tell you. I'm afraid, however, that your having no other claim than finding the tree will not entitle you to anything better than his offer to divide the honey in the fall. And if that is done any time in September you will still have time to feed up the bees.

◆

Queenless Colony.

I have a queenless colony of bees. Which would be the better way to do, send for a queen, or wait and put a queen-cell from another colony with them? COLORADO.

ANSWER.—If you wait for a queen-cell, the colony would be much depleted before the young queen would lay. Better buy a queen, or else unite with a good colony.

◆

Swarming—Wire in Comb Honey.

1. I do not want any increase, because my bees are black, and I want Italians, and I should like to know, if, when a swarm comes from the hive and I catch and kill the queen, the bees will go back into this old hive and stay until the new queen-cells are hatched. Our bees are in box-hives and I want to put the two swarms combined into a frame hive, thereby preventing increase of black bees and making a strong colony of blacks.

2. We have put wired frames of foundation in hives and the bees have filled them with honey. Will this wire, if cut and pulled through the honey, have any poisonous effects, or in any way injure this chunk honey, making it unfit for use? ILLINOIS.

ANSWERS.—1. Yes, if the queen is not with them the bees will return to the hive, but in a large apiary there will be some cases of their going to the wrong hive. Then a week or more later the swarm will issue with a young queen.

2. The wire will not in any way injure the honey beyond the tearing of the comb.

◆

Perhaps Bee-Paralysis or Robbing.

I have two colonies of bees, which wintered in fine shape on the summer stands, and built up very rapidly this spring. But on the morning of April 29, I saw quite a lot of dead bees on the floor and in front of the hive. I watched some come out and they ran as if they were crippled, or rocked back and forth, and seemed to be unable to fly when they tried. They would spin around like a top on the alighting board, and double up and die. The bees have plenty of honey. What do you think is the cause of this, and what is the remedy for it. WISCONSIN.

ANSWER.—I don't know. Looks just a little as if it might be robbing bees that were stung to death; in which case the usual care about robbing would be needed. Possibly, however, it is a case of bee-paralysis, for which I can offer no cure; but as far north as Wisconsin it does not generally amount to much, disappearing of itself.

◆

Maybe Queenless—Unpainted Hives—Stimulative Feeding.

1. Five of my colonies have been out of the cellar since March 9. A couple of weeks ago they had lots of eggs and young brood, but today they had no eggs, but sealed queen-cells. What do you suppose this means? Everything has been all right for brood-rearing.

2. May I ask why you prefer unpainted hives?

3. What are the main harmful results of stimulative feeding, if not practiced rightly? MICHIGAN.

ANSWERS.—1. The probability is that they are now queenless.

2. I think the bees are a little better off in unpainted hives. It costs more to keep the hives painted, and by the time the unpainted hives give out it is just possible I may want to change to another style of hive. If not, I think I can get new bodies for no more than it would have cost to keep the old ones painted. I want covers painted, although I am trying some zinc covers without paint.

3. Bees are induced to fly out when the weather is such that many will be chilled and lost, resulting in loss that more than counterbalances all the gain.

◆

Managing Double Brood-Chambers.

1. In using two brood-chambers for your bees in the spring, how do you handle the extra one when removed?

2. If an extra chamber is taken off full of brood, will this brood hatch, if the bees are left on the old stand?

3. How do you handle two brood-chambers for comb honey? WISCONSIN.

ANSWERS.—1. Leave the eight best frames of brood on the stand, and use the other eight where they will do the most good. Some of them will have brood in, and these may be used to strengthen weak colonies or to start new ones.

2. Some of the young bees will emerge, but great loss will generally result. Don't try it as far north as Wisconsin.

3. Simply take away one story as mentioned in 1, when it comes times to give supers. You will find the whole matter pretty fully treated in the book you have ordered, "Forty Years Among the Bees."

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FROM MANY FIELDS

Favorable Weather for Bees.

I begin the season of 1903 with 90 colonies, most of which are in fair condition. The weather is now very favorable, and breeding is going on rapidly.

I appreciate very much the visits of the American Bee Journal. A. BOOMER.

Ontario, Canada, May 8.

Death of John Nebel.

Another veteran has stepped off the stage of action. This time it is one that touches a tender place in my heart. Mr. John Nebel is dead. We had elected him President of our Missouri State Bee-Keepers' Association just a few days ago. It is sad indeed. J. W. Rouse, the vice-president will, no doubt, make us a good president, but cannot, of course, wholly take the place of the one who has gone from our midst. It is hard to understand how soon and how strange the ties of brotherhood become fixed between comparative strangers, when they unite in a common cause, but such is the case. I never saw Mr. Nebel until I met him at Moberly, at our recent convention. I have had business relations with him for about three years, and had become very much attached to him. I have been working hard for some time, trying to organize a State bee-keepers' association, and I had confided in Mr. Nebel. I suppose the good cause will go on just the same, but, somehow, a strange heaviness comes over me as I think of the departed. I believe a great

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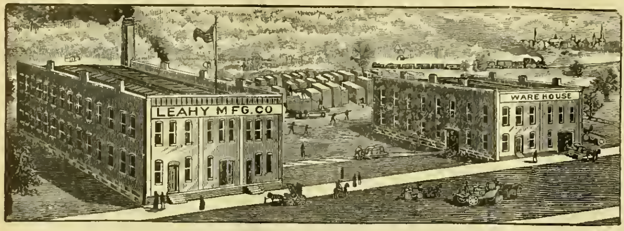

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many of the bee-keepers of Missouri and elsewhere have the same feeling, and will mourn the loss of our friend and brother. Let it be a reminder of the mortality of our race. Especially, let us endeavor to imitate the good qualities of men like Mr. Nebel.

Carroll Co., Mo., May 8. W. T. CARY.

P. S.—The Missouri State Bee-Keepers' Association, which was recently organized at Moberly, elected the following officers:

President, John Nebel; Vice-President, J. W. Rouse; Secretary, W. T. Cary; Treasurer, F. K. Thompson.

As Mr. Nebel has recently died, Mr. Rouse will succeed him to the presidency until the next election. W. T. C.

Wintered in a Bee-Shed.

We had 33 colonies of bees put up for the winter last fall, 2 being somewhat weak in bees. We had so many after-swarms last August and even in September, which weakened our old colonies and were no good. Of the 33 we wintered all but 4, or, not counting the 2 weak colonies, we lost only 2 good ones.

This spring, we had very warm weather in March, and the latter part of March we overhauled them and found every queen was laying and some had sealed brood already.

I forgot to say that we wintered them on the summer stands in bee-sheds. The sheds have three closed sides and the one which the sun strikes most upon; 20 colonies in chaff-hives and the rest in single-walled hives. We lost only one in chaff-hives. Those in single-walled hives we supplied with hemlock outer shells, but although they all had the same supply of stores last fall, those in the single-walled hives were almost out of stores in March, while the others had plenty left yet. We consider that bees wintered in chaff-hives need less winter stores.

April was cold and we had much rain, and May, so far, is cold. May 1st we had a hard frost, which killed almost all of the apple, strawberry, cherry and pear blossoms. We should have warmer weather. Under one of our hives, I discovered a striped snake, that would poke its head from under the hive at the entrance, and I suppose lived on bees, although I did not see it take any. We killed it and that ended her snakeship.

Lehigh Co., Pa., May 8. GEO. T. REX.

Bad Spring for Bees.

Our spring has been bad for bees since March 20. After the first three days in March it never even froze during the next three weeks. The 16th, 17th and 18th were so warm that I set about half of my bees out of the house cellar, and they brought in pollen plentifully from the elm and soft maple, which do not usually blossom till a month

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later. With the 24th it turned colder, and was not sufficiently warm again so the rest of the bees could be set out till April 12th and 13th. On the 14th it turned cold again with a continuous north wind, so that the ground was frozen every morning for the next 12 days except one. Most of the days it was also too cold for the bees to fly.

On April 28th the mercury went up to 55; on the 29th to 77; and on the 30th to 87. The bees enjoyed this, but the night of the 30th the mercury sank to 28, and at noon of May 1st I was at our mill where they grind feed by water, and the spray from a little jet, caused by a nail-hole in the "water trunk," was freezing and had frozen on to a little tree, so that it was all bowed down with ice; and there were icicles on it an inch in diameter and two feet long. And the sun was shining on this tree and spray all the time. Such freezing of water on a sunshiny day in May, at mid-day, was never known here before.

On the morning of May 2, we had ice an inch thick on standing water, and ½ inch thick this morning, May 5.

There is very little brood in any of the hives, and the bees are not nearly so good as they were in March. They came out of the cellars in good shape, and would have been now, if we could have had a good spring. If it does not turn warm soon, to stay so, those colonies lightest in bees will perish.

G. M. Doolittle.

Onondaga Co., N. Y., May 5.

Cold and Windy Weather.

Bees generally winter well here. The most of April, and so far this month, the weather has been bad for the bees. Fruit-trees have been in full bloom for over a week, but we have had very few days that the bees could improve the time, owing to the cold, cloudy and windy weather. F. A. Snell.

Carroll Co., Ill., May 4.

Bee-Keeping in Florida.

I see a communication from Mrs. L. Harrison, of Washington Co., Fla., in the Bee Journal. She seems to speak very discouragingly of bee-culture here. I wish to say that there have been some of the largest yields of honey in our State ever known. Mr. W. S. Hart produced an average of over 250 pounds per colony from 100 colonies, and I have had some splendid yields in the pine woods of Columbia county. We have several up-to-date apiaries. My brother and I have over 100 colonies, and took the premium at the State fair last November for greatest variety and best honey; and Mr. George Van de Vord for bees. Besides there are several large apiarists in West Florida, who do a good business with their bees. D. H. Herlong.

Columbia Co., Fla., May 3.

"Sweeter Than Honey."

German Presbyterian Theo. Seminary,
Dubuque, Iowa, Sept. 20, 1903.

Mr. Weigand—

Dear Sir:—I was agreeably surprised in receiving by your son, some delicious honey, which you so thoughfully forwarded us. Mrs. McClelland and I have feasted on it and enjoyed it not only because of its own excellent quality, but even more because of the kind thoughtfulness which prompted the gift. As for myself, I found my mind, no less than my mouth, absorbed in its enjoyment. I could not refrain from thinking on the words of the Psalmist, "Thy word is sweeter than the honey and the honey-comb." The more I thought, the more resemblances between the Bible and honey-comb. Permit me to name some of these resemblances between the Divine honey-comb and that of the bee. The most obvious is that of sweetness, as given by the Psalmist. Truly God's word is very sweet to the man of spiritual discernment. And of all the elements of sweetness none so pronounced and delicious as the wonderful love of God as set forth in Holy Scripture.

Again, as I examined the comb itself, I found each cell was a regular hexagon. How wonderful this! Surely, God is here. For, as each angle in such a cell is 108 degrees, it is

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3—17A5t

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We guarantee safe arrival by return mail.
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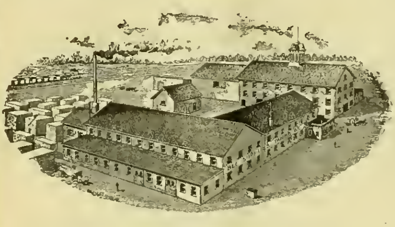

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Untested	$1.00	$ 5.00	$ 9.00
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Add price of any Queen wanted with Nucleus. Our bees are shipped in light shipping-cases. Purchaser pays express on Nuclei. Safe arrival guaranteed of all stock sent out.

BATAVIA, ILL., Aug. 21, 1901.
Dear Sir:—I thought I would let you know as to results of the nucleus sent me. They were placed in 10-frame hives and now they are in fine condition. From one I removed 24 pounds of honey and had to give 6 of them more room, as they were hanging out. They have more than reached my expectations.
Yours respectfully, E. K. MEREDITH.

DAVENPORT, IOWA, Dec. 31, 1901.
Your queens are fully up to standard. The honey queen that you sent my brother takes the lead. She had a rousing colony when put up for winter. The goldens can be handled without smoke or veil. Very truly yours,
JOHN THOEMING.

Notice. — No tested stock sent out before May 15. Send money by P. O. Money Order or Express Order. **D. J. BLOCHER,**
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CHAS. B. ALLEN,
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to meet those who work for us. Cow keepers always have money. We start you in business. You make large profits. Easy work. We furnish capital. Send 10 cents for full line of samples and particulars.
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can be had free by writing us. Mr. H. M. Horton conducts this department in our great
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Contracts with dealers a specialty. Discount after July 1st
Send for circular.
JOHN M. DAVIS,
9A26t SPRING HILL, TENN.
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The Danz. Hive—
The Comb Honey Hive.
We sell it. We are authorized jobbing agents for **THE A. I. ROOT CO., for Michigan.** Send us a list of the goods you want for this season, and let us quote you prices. Beeswax wanted. Send for catalog.
H. M. HUNT & SON,
10A17t BELL BRANCH, MICH.
Please mention Bee Journal when writing.

just that very angle whereby the greatest strength with the least material can be secured; so that every cell bespeaks the presence of God who alone could thus guide the bee unconsciously to the uniform making of such an angle. Yes, each cell tells of God.

I find the same in every book, chapter and verse, yes, word, of Holy Scripture, like the cell of the comb; there is the presence of the infinite mind even while employing men like so many bees in the formation of this Divine honey-comb of Holy Scripture. But, after all, the sweetness of the product of all these bees is the one quality most obvious. Surely, to the man of spiritual taste, there is and can be nothing so sweet as the Bible—God's great honey-comb. Nor could I fail to note that, although so many bees are engaged in the construction of the comb, there was no confusion in the process or in the result. Each did its own work in its own place. Just so was it with God's honey-comb—the Bible. Different writers, in different lands, and from different sources, gathered the materials for God's honey-comb, even as in the structure of this of the bees.

But why should I weary you with this line of thought suggested by your gift? Enough to state that to mind and palate your gift was enjoyable.

Again thanking you for your gift, I am,
Very truly yours in the Lord,
A. McCLELLAND.

[The above was sent to a friend of ours (Mr. A. Weigand) who handed it to us for publication. Mr. McClelland is about 65 years of age, and has been blind since his 8th year. But his spiritual vision seems to be all right. —EDITOR.]

Honey and Fried Bacon.

One of the boys in the Second Regiment tells me that, while encamped in southern Florida, he went out with a searching party for water. After finding a good spring in a ravine a mile or so from camp, he was about to return, when he discovered bees going in and out of a large dead palm-tree. With axes they felled it in such a manner as to split the shell wide open. Then they gathered many combs of beautiful honey in several large new handkerchiefs. Returning to camp, they squeezed or pressed (with the aid of sticks) the honey out on a lot of bacon just fried. The boys had the best meal since they had left home. I have developed a fondness for honey and bacon since hearing the story, and prefer it to any kind of steaks.

The fellow who picked up the honey had bees all over his sticky hands and was not stung, but the one who tried to run was stung many times. F. H. DRAKE.

Wocester Co., Mass.

Lost Bees in Winter.

I had the misfortune to lose all my bees the past winter, with the exception of one red clover colony. This colony built up from a 2-frame nucleus to a very strong colony; in fact I took one of the frames of brood away to strengthen a weak colony. The colonies, 4 in all, starved, I think; in fact I know they either had foul brood or black brood. Mr. E. R. Root thinks it was foul brood, but this spring I cannot see any signs of disease, and shall try to build up some good colonies from this queen. Her hive is full of brood and bees at this writing, but the weather is bad for bees here. I have 52 fine colonies in the South; there was not a day the past winter but what they were flying.

I don't believe I ever wrote to you about the queen I got from you when I subscribed for the American Bee Journal. She came all right and I made a nucleus and after 24 hours introduced her; she went right to laying, and in about 2 weeks after, I had a weak colony with a poor queen, and I thought it best to pull her head off, and that I would then put these 2 colonies together. I smoked both colonies, but the next day I found the queen dead in front of the hive, and they then reared a queen of their own, but all petered out last winter. I notice some queen-breeders complain of being imposed on; if they will take my advice, that is, when I get an order for a queen, say they are cash with the order, and no queen replaced, unless the dead queen is returned. No honest man will object to this.

I have read Mr. France's address on foul brood in the American Bee Journal of April 16, and I shall study it closely, as he describes it so clearly that it seems to me one can detect the disease.

I like the "Questions and Answers." I am not a newly-hatched chick, but I find I have lots to learn, in fact in my ABC's yet, although I am 69. R. L. McColley.

Wood Co., Ohio, May 4.

Feeding Bees.

There are frequent inquiries in the American Bee Journal and other bee-papers about feeding bees. It may be of interest and perhaps helpful to some to know how I am feeding 100 colonies at the present time. I began feeding early in March, and the spring has been so unfavorable that I have had to feed more and more until I am now feeding all in the yard.

I feed granulated sugar syrup in the pepper-box or Hill feeders. By using an empty hive-body for a super, or something of similar depth, and then placing a chaff cushion in this super so large as to cover feeder, bees and all, one can feed very rapidly and satisfactorily. It is important, of course, to have the cushion fit snugly to all sides of the super. It is not to be understood that I feed all my colonies at one time. I have made twelve feeders for the whole number. Edwin Bevins.

Decatur Co., Iowa, May 8.

Bees Wintered Well.

I have 15 colonies of bees. All came through the winter in fine shape. I did not lose even a queen. They are doing well, considering the cold weather we have had.

E. C. Swift had two swarms the last week of April. D. J. Price.

LaSalle Co., Ill., May 7.

WE announce with sorrow the death of our father,
JOHN NEBEL,
the senior member of this firm, who passed away on Tuesday, May Fifth, in his seventieth year.
The business of the firm will be carried on as in the past, and all orders entrusted to our care will receive prompt attention.
Thanking our friends for past favors, and hoping for a liberal share of your future patronage. Yours truly,
JOHN NEBEL & SON.
High Hill, Mo., May 6, 1903.
Please mention Bee Journal when writing

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Having had 5 years' experience in **Rearing Queens**
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Untested Queen, 75c; 6 for $4.00
Tested Queen, $1.00; 6 for 5.00
Natural Swarming and Supersedure.
Untested Queen, $1.25; 6 for 6.00
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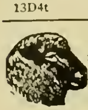
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That covers the whole Apicultural Field more completely than any other published,
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15Atf Please mention the Bee Journal.

65 Best Queen of Sixty-five 65
Belle Plaine, Minn, April, 1903.
Mr. Alley:—I have a queen received from you in 1900. Her bees are the best honey-gatherers of an apiary of 65 colonies in which are queens from different breeders—natural queens —as Dr. Gallup calls them. The Adel queen is the best of the lot. C. J. Oldenberg.
A Tested Adel Breeding Queen and my new book giving result of 40 years' experience in rearing queens, sent by mail for $2.00. Warranted Adel queens, each, $1.00. Safe arrival guaranteed. Send for price list of queens and prospectus of book.
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HONEY AND BEESWAX

MARKET QUOTATIONS

Chicago, May 7.—The past winter and present spring have been a disappointment to producers and dealers in honey, in that the consumption has been away below the average of the past decade. Choice to fancy comb is held at 15@16c per pound, with off grades at 2@5c less per pound. Extracted, white, 6@7c; ambers, 6@6½c; dark, 5½@6c. Beeswax in good demand at 32c. R. A. Burnett & Co.

Kansas City, May 11.—The supply of comb honey is about exhausted. The demand good. We quote you as follows: Fancy white comb, 24 sections, per case, $3 50; No. 1 white comb, 24 sections, $3 40; No. 2, white and amber, per case, $3.00@3.25. Extracted, white, per pound, 6@6½c; amber, 5½c. Beeswax, 25@30c. C. C. Clemons & Co.

Cincinnati, Apr. 27.—Little demand for comb honey at present; fancy white sells at 15@16c in a small way. We quote amber extracted at 5½@6½c; white clover, 8@9c. Sales not as lively as expected this season of year. Cuban extracted is offered on all sides, and future prices are awaited with intense interest. Beeswax strong at 30c. The Fred W. Muth Co.

New York, May 8.—The market on honey is very quiet and very little doing, with more than sufficient supply on hand to meet the demand. Fancy stock of comb honey is well exhausted, while other grades are still plentiful and selling at 13 cents for No. 1, 12c for No. 2, and 11c for amber; no demand for buckwheat. Extracted remains quiet at unchanged prices. Beeswax firm at 31c. Hildreth & Segelken.

Cincinnati, May 8.—The demand for comb honey is nearly over, but as the stock is almost exhausted, prices keep up. Fancy water-white brings 15@16c. The demand for extracted has not changed whatever, and prices are as follows: Amber in barrels, 5¼@5½c; in cans, 6@6½c; white clover, 8@8½c. Beeswax, 28@30c. C. H. W. Weber.

San Francisco, Apr. 29.—White comb honey, 12@12½c; amber, 9@10c; dark, 7@7½c. Extracted, white, 6½@7c; light amber, 5½@6c; amber, 5@5¼c; dark, 4@4¼c. Beeswax, good to choice, light 27@29c; dark, 25@26c.

Last year's product has been tolerably well cleaned up, particularly the desirable stock. Present offerings are largely odds and ends, including little of fine quality. Values for the time being are little more than nominal. A lower range of prices is looked for on coming crop.

WANTED WHITE CLOVER EXTRACTED HONEY!
Send sample and best price delivered here; also Fancy Comb wanted in no-drip cases.
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Hunter, Texas. Louis H. Scholl, Sec.

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are no better than those we make, and the chances are that they are not so good. If you buy of us **you will not be disappointed. We are undersold by no one.** Send for new catalog and price-list and free copy of THE AMERICAN BEE-KEEPER; in its thirteenth year; 50 cents a year; especially for beginners.

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We have some of the Clark Cold Blast, which when new sell now at 55 cents each; some of the Large Bingham—new at 65 cents each; and some of the Little Wonder Bingham—new at 50 cents. But to close out those we have left that are slightly damaged, we will fill orders as long as they last at these prices:

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AMERICAN BEE JOURNAL

43d Year. CHICAGO, ILL., MAY 28, 1903. No. 22.

SOME PICTURES OF BEEDOM.

(See next page.)

Rev. H. A. Winter at Home.

Frank W. Atkins and Swarm on his Hat.

Tom Carver and his Apiary.

Apiary of C. C. Chamberlin.

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1st.—To promote the interests of its members.
2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

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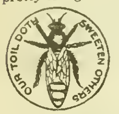
OUR TOIL DOTH SWEETEN OTHERS

The picture shown herewith is a reproduction of a motto queen-button that we are furnishing to bee-keepers. It has a pin on the underside to fasten it. Price, by mail, 6 cents; two for 10c; or 6 for 25 cents. Send all orders to the office of the American Bee Journal.

Miscellaneous Items

Some Pictures of Beedom.

Rev. H. A. Winter at Home.

Rev. H. A. Winter was ordained a minister Sept. 12, 1852, at Upper Sandusky, Ohio. Last September he celebrated his Golden Anniversary. The picture on the preceding page shows him as he appeared at the time of his celebration. We have had the pleasure of meeting Rev. Winter several times at the annual conventions of the Wisconsin State Bee-Keepers' Association held at Madison. Mr. Winter is also an old bee-keeper, and takes great interest not only in caring for the bees, but in everything connected with the business, especially the meeting of the bee-keepers. As he sits in his chair in front of his beautiful home he seems to be the very picture of contentment. He appears also to be the center of attraction, if we may judge from the pleasant faces which surround him. It is a great pleasure to meet Mr. Winter, as he is always jovial and entertaining. We wish him yet many years of happy life, full of opportunities to bless mankind.

C. C. Chamberlin's Apiary.

In the spring of 1902 I sent a picture of my apiary in winter, and I then said I would send another picture when the outer cases were removed. The picture has been taken for a long time, but I have not been very prompt in sending it. I keep as near 50 colonies as I can by doubling up during swarming time and in the fall. My entire crop of honey last year was 500 pounds, the smallest crop since I have been in the bee-business, all from 53 colonies. The cause of such a poor crop was so much wet weather which lasted all through the season. C. C. CHAMBERLIN.

The Old Soldier's Apiary.

I enclose a picture of our friend, Thomas Carver, and a part of his apiary. "Tom," as we all know him, is an old soldier of the Wisconsin Volunteers, of Company B, 28th Regiment. He enlisted at East Troy, Walworth Co., Wis., and helped defend Old Glory for three years. He is still in Uncle Sam's employ as mail-carrier.

Tom contends that the black bees of Arkansas were a "holy terror" during the early 60's, and continues by adding that if he had known what he has since learned about bees at "York's School," he could have evaded a whole lot of swelled eyes after being on a honey-foraging expedition. We find him an apt student in apiculture. He laments that he waited until the evening of life before courting acquaintance with the bees, and acknowledges he must rush business in order to get anywhere near his portion of the fun.

Ye fishermen, you should see the old soldier fool the finny tribe. He thinks the "Ladies' Relief Corps" in the Bee Journal is about right. He boasts that he can handle Yon Yonson's remarks to a finish.

By the way, the old soldier got a good crop of honey in 1902, and contends it's easy if one will but pay attention to what the Bee Journal says.

There is another good old student farther up the river, one W. Irvin. I will "show him up" later on. He, too, is an expert with the rod. So, when the three fishermen go after the finny tribe, there is usually room made for fish-stories.

J. P. BLUNK (the other fisherman).
Webster Co., Iowa.

Frank W. Atkins and Hat-Swarm.

It is with much interest I read the different methods of bee-keeping in the Bee Journal.

My father always kept bees in box-hives, and I helped him care for them. When he died, three years ago, and left me the bees to care for alone, I decided to transfer some of them to frame hives; and now my apiary contains 25 colonies, all I find time to manage successfully.

Last August I subscribed for the American Bee Journal and also got an Italian queen. I introduced her according to the directions on the mailing-cage, and now I have a fine colony of Italians.

I send a photograph. Mother took it with my kodak. This, however, does not show the apiary, but you will notice in the picture my hat hanging on a crow-bar with a swarm of bees on it. This swarm came out the last of July and went out over the meadow. As there was nothing there for them to alight on I took the bar out, intending to make a hole to set a bush in, but as soon as I got in under them they began alighting on my hat, so I took it off and hung it there for them. I hived them in a log-hive, intending to "take them up" last fall, but they did so well I put them into the cellar with the others. They nearly filled the old log-hive. Besides, they have changed from blacks to hybrids, and are nearly as golden as Italians. The nearest Italian bees kept here at that time were two miles away.

I take great pleasure in the bees, and receive some profit from them; also lots of good information from the American Bee Journal.

Clinton Co., N. Y. FRANK W. ATKINS.

◆

DR. MILLER'S NEW BOOK is thus reviewed by Editor Emerson T. Abbott, of the Modern Farmer and Busy Bee:

"Forty Years Among the Bees" is the title of a new book which we have received from the author, Dr. C. C. Miller, of Marengo, Ill., with his compliments. One hardly knows where to begin to read such a book, much less to write about it. It is not arranged like other books, and is not like any other book any more than its author is like other men. Dr. Miller has a distinct and unique personality which is all his own, and his book is eminently like him. We find Dr. Miller on every page of the book, and we may say that it is none the worse for that. In fact, while the book is primarily about bees, and not about Dr. Miller, to take him out of it would be to destroy its value, largely. We not only find Dr. Miller in the book, but we find his entire family, which is also perfectly natural, for Dr. Miller is his family, and his family is Dr. Miller, for they probably come as near being a unit in their home and in its work as any family on earth. The Doctor and his family follow bee-keeping for a living, but not for the money there is in it, for they could make more money at other things. They follow bee-keeping for the joy they find in living that kind of a life, as is clearly brought out by the biography which the Doctor has woven in his bee-story.

We do not know as the book can rightly be called a text-book on the industry, yet there is very little of what is known as modern bee-keeping which is not found in its pages and stated in a way which any one, be he ever so ignorant of the industry, can understand, and yet in so interesting a way that the reader is not likely to lay the book down after he has begun to read it, if he has the time, until he has read it through. It is just such a book as one who knows Dr. Miller would expect him to write, and is a fit heritage to leave behind one to mark the metes and bounds of a useful, helpful, and well-spent life.

Every bee-keeper should own and read a copy of "Forty Years Among the Bees," and every one who is anxious to learn of the ups and downs, as well as the intense fascination of this world-wide industry, should also read it.

We said above that Dr. Miller is on every page of the book, but we wish he was more in evidence on one of its pages, at least. The one thing lacking to complete and round out the book as it should be, is a first-class half-tone of the genial Doctor, just as he looks at the end of 40 years of bee-keeping experience. We think no better recommendation of the value and helpfulness of the industry could be produced. The book, however, has a wealth of illustrations, which are both interesting and practical.

ESTABLISHT IN 1861
AMERICAN
BEE JOURNAL
THE OLDEST BEE-PAPER IN AMERICA

43d YEAR. CHICAGO, ILL., MAY 28, 1903. No. 22.

Editorial Comments

Get Rid of Vicious Bees.—Sometimes it happens that cross bees attack you whenever you enter the apiary, and careful observation may show that the cross bees all come from one colony. Kill its queen, and replace her with one of gentler stock. If your bees seem generally cross, even when there is no occasion for it, as during a full flow of nectar, better introduce new and better-natured blood.

Brace-Combs in Sections are objectionable. Some bees are worse than others at such work, and when a colony shows itself particularly bad, care should be taken that at least there be no breeding from it. But be sure that you do not lay the blame on the bees when they are innocent. When bees are crowded for room, any bees may be forced to build unnecessary brace-combs, so be sure that they have plenty of super-room.

The Correct Use of Bee-Terms, at least of a few of them, is a matter of more or less perplexity to those not familiar with them. An egg in a cell hatches out into a *larva*. *Larva* is the singular, *larvæ* the plural; one *larva*, two or more *larvæ*. *Larval* is the adjective; as "bees in the *larval* state." *Nucleus* is the singular, *nuclei* the plural: one *nucleus*, two or more *nuclei*. When used as an adjective *nucleus* is the word; *nucleus* plan, not *nuclei* plan of increase, no matter if a hundred nuclei are used.

Testing Barrels for Leaks.—Some discussion upon this point has occurred in Gleanings in Bee-Culture and the American Bee-Keeper. It appears there are different ways. If you blow into a barrel, a leak may be located by a hissing sound. The use of a pump, such as cyclers use for inflating tires, makes the blowing easier and stronger. The same hissing sound occurs if the lips be applied to the bung-hole and the air drawn out instead of blown in, and, perhaps, greater force can be used in this way. N. E. France suggests a plan still easier, if you already know the particular point to be tested. Apply moisture to the spot, then blow into the barrel. If there be any hole, the slightest blowing will show it by means of the bubbles that appear.

Transferring Larvæ into Queen-Cells is a thing that any novice may undertake, and he is likely to be delighted to find what an easy thing it is to do. The only tool needed is a quill tooth-pick, or, perhaps better, a tooth-pick cut from a joint of timothy grass. When you find queen-cells started in any colony, after brushing the bees off the comb dip out the larva, and then be sure to wipe it off the end of your pick. Having obtained a comb of young brood from your best queen, dip out a small larva—one not more than a day or two old—and place it in the same place from which you have already removed the larva in the queen-cell.

It is not easy to dip a larva out of the bottom of a worker-cell of full depth, so break down the cell-walls sufficiently for that purpose. When you have transferred the larva, mark the cell by thrusting in above it a wire-nail 1¼ or 1½ inches long. In this way proceed with all the queen-cells you find in the hive. Nine days later cut out the queen-cells and use them where wanted.

Do Old Combs Affect Surplus Honey?—There is no question, probably, that they may have some effect upon either comb or extracted honey. Whether they always do, and to what extent, are separate questions. For ordinary purposes, old combs do very well for extracted honey, although it is possible that the honey may be very slightly darkened when stored in cells that have been used for brood-rearing. But after having been once extracted from, if not again used for breeding purposes, they ought to be as good as if never used for breeding, with the advantage of being tougher.

As to comb honey, however, the influence of old, black combs *may* be emphatically bad. Let such a comb face a frame filled with sections, and you may confidently count that some of the cappings of the sections will be very dark, the black wax being apparently carried over from the brood-comb to the sections. If sections be placed over black combs, the bees may be relied on to carry up some of the black comb, if the distance be not too great. This explains the reason for whiter sections when a honey-board or excluder is used between the brood-chamber and sections. The same whiteness is claimed by the use of thick top-bars.

Feeding Meal in Spring.—Feeding some kind of meal in the spring as a substitute for pollen is perhaps more common in England than in this country. John M. Hooker, a man held in high esteem among British bee-keepers, who is now in this country, offers the following note of warning in the American Bee-Keeper:

> I tried the feeding of pea-meal in England, where, at one time, its use was advocated by many, but only in exceptional districts is it now used, where little or no early pollen can be obtained in the natural way until much later in the season. It was found that many of the combs were half filled with this meal, honey being placed on the top of it and sealed over, having both the weight and appearance of being full of honey. Little honey, however, was obtained from them in the extractor, and the pollen-bound combs had to be melted down. Sometimes the bees will bite away the comb down to the mid-rib, and roll the hard masses of meal out at the entrance, and the labor and time occupied in doing this is considerable. I have seen this occur in my own apiary.

Watery Sections of Honey, or those whose cells are filled so full of honey that there is no air-space between the honey and the cappings, are very undesirable. The best way—perhaps the only way—to avoid them, is to avoid the bees that make them. Two colonies may stand side by side, working on the same flowers, and one will store honey of snowy whiteness, while the sections of the other will look so dark and watery as to bring two or three cents less in price. If you observe closely, you may find in the same apiary some colonies that make sections distinctly whiter than those made by any other colony in the apiary. Breeding from such a colony, if the bees are desirable in other respects, will whiten your future sections.

Straining Foreign Particles Out of Wax.—Some who use solar extractors may take advantage of a plan given in the British Bee Journal. Take the wax that has been extracted in the usual way and put in fine muslin and return to the extractor. As it melts the debris will remain in the cloth, while the pure wax will slowly ooze through.

Introducing Queens at Swarming-Time is recommended by the Modern Farmer and Busy Bee. A few days before a swarm issues, place the new queen, caged, in the hive, where the bees have free access to her; then, after the swarm has issued, arrange the cage so the bees can liberate the new queen by eating out the candy.

Convention Proceedings

Report of the Wisconsin State Convention.

BY GUS DITTMER, SEC.

(Continued from page 326.)

SECOND DAY—MORNING SESSION.

The convention was called to order at 9 a.m. by the President.

EXHIBITS AT CONVENTIONS.

Mr. Fox spoke of having exhibits at the annual conventions. To the members attending these meetings it would be no extra expense to speak of, which was not the case in making an exhibit at either a County or State fair.

Mr. France spoke of offering inducements in the way of premiums for the exhibits by manufacturers and supply-dealers. He spoke of a case where an exhibit had been made at considerable expense and no premiums given; and thought that unless premiums were offered there would be no premiums of the kind in the future.

Mr. Dittmer said that the advertising of the manufacturer and dealer in displaying his goods was enough, and that he was opposed to paying premiums for the privilege of advertising.

Mr. Wilcox—The exhibits should be in separate rooms, as it attracts the attention of the members from the discussions.

Mr. Huffman—The question is, Shall we offer premiums?

Mr. Wilcox—We can't afford it.

Mr. Fox—I am willing to bring honey to exhibit without a premium.

Mr. Pierce—I suggest that we ascertain how many will bring an exhibit next year.

Mr. Fox—I move that we offer premiums if we can afford to do so. Carried.

QUILTS AND HONEY-BOARDS IN WINTERING.

"How early should the quilts be put on in the fall?"

Mr. Wilcox—No need to put them on at all unless you winter the bees outside.

Mr. Otto—I never use quilts, but honey-boards, and put the bees in late. Bees are always quiet, and I am never troubled with moisture in the hive.

Mr. Pierce had experience with honey-boards, oilcloth, and cushions. He had trouble with moisture dripping from honey-boards and oilcloths; the cushion is warm and absorbs the moisture, which is always at the top.

Mr. Otto—I don't think you can winter as well without the honey-board, as the bees need water.

Mr. Huffman—Do they use it to thin the honey?

Mr. Fox—The quantity of the moisture depends on the temperature in the cellar. The higher the temperature the more moisture.

Mr. Huffman—I abandoned the honey-board long ago and took to quilts. I am never troubled with moisture or bees needing water. My cellar is dry and all right. In a wet cellar the bees are liable to be moldy.

Mr. Pierce—I think that in a cold cellar there is liable to be too much moisture, and that in a warm one it will evaporate and pass off.

Mr. Adair—I find that they are liable to be wet with a honey-board, as the moisture accumulates on the board and drips on the bees.

Mr. Huffman—I found moisture frozen on the top of the honey-board, which shows that the moisture passes through the cushion and out of the hive.

CARRYING BEES IN AND OUT OF THE CELLAR.

"Is it the practice of all bee-keepers to close the entrance of hives in carrying bees into and out of the cellar?"

Mr. Fox—I don't believe it is.

Mr. Dittmer always carries them in and out without bottom-boards, on cold mornings, providing indications are that the bees can have a flight that day. He pays no attention to location.

Mr. Fox never closes the entrance, and pays no attention to location.

Mr. Pierce thinks it a mistake to put them out in the morning.

Mr. Gross always puts them in at night, when there is no trouble about bees flying about. He put them out once in the morning, and afterward had a snow-storm.

Mr. Otto finds a smoker very useful in taking bees out. He has taken them out when there was a snow-storm afterward, and there was no harm done.

Mr. Wilcox takes them out during the day so they can fly. He thinks it risky to take them out at night, as they can not get back, and cluster outside.

"Is it best to take them out in the morning or in the afternoon?"

Mr. Fox—That depends on the distance you have to carry them.

A vote was called for, and the majority voted in favor of taking them out in the morning.

Mr. Pierce—At home I prefer to take them out in the morning, and always put them on the old stand.

Mr. Wilcox—It is always advisable to put them on the old stand if convenient.

Mr. Otto—I always put them on the old stand.

An expression being called for, a majority voted in favor of putting the bees on the old stand.

Mr. Pierce thought that they should be looked over occasionally during the winter, even if most of them were all right.

Mr. Fox—If the entrance is kept open they should not be disturbed until after the first flight.

Mr. Wilcox—The proper way is to use a loose bottom-board.

"How do you keep the mice out?"

Mr. Wilcox—Keep the bees in and you will have no trouble to keep the mice out. I find a mouse in the hive occasionally, but have had no bad results.

"What do you have for a bottom-board?

Mr. Wilcox—I place the hives six inches apart, and then lay boards across the top, on which I place the next row, and so on. These boards are the bottom on which the dead bees drop. This always keeps the hive clean. I have no trouble in taking them out, as we let it cool off first. If they bother us about coming out, we use smoke and drive them back.

"How far is your cellar from the yard?"

Mr. Wilcox—We have to carry them from 20 to 50 feet.

Mr. Moe—Do you prefer to put them in late or early? In cold or moderate weather?

Mr. Wilcox—If they are out too late they will freeze. I put they out, say from the 15th to the 20th of November.

Mr. Fox—From the 15th to the 26th is my experience.

Mr. Huffman—That depends on the condition of the weather. I would leave them out until after Christmas, if the weather was favorable.

Miss Bruce—That depends on the condition of the cellar. If it is wet leave them out; if it is dry it will be all right to put them in early.

Mr. Wilcox—That does not matter with me. Just leave the cellar door open until the weather is cold enough. That will keep the bees in, and give them plenty of fresh air to keep them quiet. If I am troubled about bees clustering on the bottom I raise the hive from the bottom-board and let them cool off. They will go up all right.

SOWING ALSIKE FOR HONEY.

"Is it profitable to sow alsike exclusively for honey?"

It seemed to be the general opinion that it did not pay, that it was worth several times more for hay than for honey, and that we could not afford to sow it for honey alone.

Mr. France raised the question if it would not pay to furnish the seed to the farmers?

If you do they will think you are getting all the profit and the best end of the bargain.

Mr. Huffman—You must induce farmers to sow alsike instead of red clover. Get them to understand that it is most profitable to them. I am satisfied that it is a mutual benefit.

This was followed by a discussion as to the merits and paying qualities of alsike for honey as compared with alsike for seed.

LAYING WORKERS.

"How can a laying worker be detected, and how prevented?"

Mr. Minnich—My method is to get rid of them by taking the hive off some distance, shake all the bees from all of the frames, and let them fly back to the old stand, where a new hive has been prepared, new frames and a queen.

Mr. Huffman—Put into the hive frames with hatching brood and they will kill the laying worker.

Mr. Wilcox—Put a new colony on the old stand, and let the bees go to this.

Mr. Gross had been successful with putting a ripe queen-cell into the colony.

Mr. France thought they would break it up, and that Wilcox's plan was the best. He said he had seen them, and by catching them had gotten rid of them.

"Is it advisable to give the bees a cleansing flight in winter?"

A majority thought it was not, but it was the opinion of some that it might be desirable in case of dysentery.

APPROPRIATION IN THE LEGISLATURE.

Mr. France reported on conference with Assembly Committee on Agriculture, that they were willing to recommend more than $700, but that they did not think the Assembly would allow more.

Mr. Wilcox thought we ought to ask for an appropriation for an exhibit at St. Louis.

Mr. Gross—Preparation must be made now; if we don't ask for it now it can't be done later.

Mr. Moe moved that the President and Mr. Wilcox be authorized to ask for an appropriation of $1000. Carried.

Mr. France—If the $1000 is granted shall we commence preparations at once?

Mr. Wilcox—As the entries need not be made until August, 1904, we can exhibit fresh honey, and will have a chance to make the arrangements at our next annual meeting.

ELECTION OF OFFICERS.

The following were elected by unanimous vote: President, N. E. France; Vice-President, Jacob Huffman; Secretary, Gus Dittmer, of Augusta; and Treasurer, Harry Lathrop.

Mr. France was recommended to the Governor for the appointment as State inspector of apiaries.

Mr. Wilcox was recommended to the Agricultural Committee as judge of the honey exhibit at the State Fair.

A general discussion in regard to exhibits at State and County fairs took place. It was the general opinion that the inducements were not sufficient to warrant successful exhibits.

Mr. Wilcox—The inducement is to advertise yourself.

Mr. France was always financially "out" on exhibits at County and State fairs, but always built up a trade by means of it. He stated that at some of the fairs one horse-race paid more than all the agricultural premiums put together.

Mr. Lathrop—The best remedy for such a state of affairs is to stay away.

Mr. France—This will kill the fair.

Some thought that it would be just as well to let it die, and perhaps better.

Pres. France read his report as General Manager of the National.

Adjourned to 1 p.m., when the convention was called to order by the President.

TAXING BEES.

"Is it right or lawful to tax bees in some localities and not in others?"

The general opinion seemed to be that it was not right, but that if legal they should be assessed everywhere alike.

Mr. Otto—The attorney says that all property must be assessed unless exempt.

Mr. Post always pays taxes on bees.

Mr. France—I always pay taxes on my bees, and make the assessor and treasurer specify it so. He cited a case where a common council tried to declare bees a public nuisance, but changed their minds on seeing a receipt of taxes specifying bees as property. It is not lawful to leave them out. Everything should be specfied and enumerated.

Mr. Fox—It is lawful to assess, and the assessor is liable for neglect under the law. I do not think that chickens are assessed in my town.

USING A TENT WITH BEES.

"Has any one here had experience with the open-top tent? If so, with what result?"

Mr. Pierce—I have had experience to considerable extent, and find it all right. I know that it is argued that if left open long enough bees will find the way back through the opening in the top. I have left it open for a whole hour and had no trouble, as the bees seem to miss it. I use mosquito-bar in the home yard, and wire-screen at the out yard.

Mr. France—I don't see how any one with lots of bees can get along without it; it is indispensable to me.

When do you use it mostly?

Mr. France—In the spring, looking over the colonies and clipping queens; also in the fall after the honey-flow, when bees are robbing, you will need protection, and can not get along without it.

Mr. Gross—I do all this right along without a tent, and I am never troubled.

Mr. Fox—I am often troubled in the fall when extracting, but I go right along about my business, and pay no attention to them and get along all right.

Mr. Minnich never has any trouble clipping queens and in taking off honey; he uses escapes, and never has any trouble.

Mr. Gross also never has trouble taking off honey for extracting.

Mr. Pierce—There must be a difference in locality. I could not do it in mine. I think you would always use a tent if you would use it once.

Don't the bees follow you from hive to hive?

Mr. Pierce never has any trouble that way, as the bees follow the tent only.

Mr. France—Some of you claim you are not troubled when clipping queens. Supposing you clip early. Then the tent is valuable.

HIVE BOTTOM-BOARDS.

"Who has used a ⅞-inch entrance?"

Messrs. Pierce and Adair had used it.

Mr. Lathrop spoke of an idea mentioned in the new "A B C of Bee-Culture," that the bottom-board could be adjusted to any desired width.

WOMEN AT CONVENTIONS.

"Why don't we bring our wives and daughters to our conventions?

Mr. France—The best part of the Northwestern convention was the attendance of the ladies. We should bring them.

Mr. Rice—At some of the meetings I have attended there were as many ladies as men. For my part, I think we should induce the ladies to come with us.

CELLAR-WINTERING—OTHER MATTERS.

In preparing colonies for cellar-wintering should the full combs of honey be put in the center of the hive?"

Most of the members said no.

Mr. Otto—Bees can not cluster on filled combs, but must have empty combs in the center to cluster in.

Mr. Huffman—It is the nature of the bees to cluster in the center, and if full combs are used they must be spread apart—about five combs to an 8-frame hive.

"What is the best way to repair broken ends of frames?"

Mr. Fox—Nail a piece on top of the broken end, or, if split, drive nails through.

Mr. France—Transfer the comb to a new frame.

"When should the bees be put out in the spring?"

Mr. Fox—I used to put them out late, but of late years I put them out early, so they can get the early pollen.

"Why does some honey granulate and others don't—all Wisconsin honey?"

Mr. Fox—My experience is that the difference is in the temperature.

Mr. Otto—My experience is that all honey will granulate.

Mr. Gross—I agree that this is the case with extracted, but not with comb honey. I know of a case of comb honey 10 years old that was not granulated.

Mr. France cited Mr. Ochsner, who claims that honey will not granulate if kept in a warm room.

"Gleanings says, 'The very meanest colony to get into the supers is the one with an inch or so of sealed honey under the top-bars.' Is this true with colonies run for extracted honey?"

Mr. Fox—I never have any difficulty when there is honey in the field.

Mr. Huffman—That is my experience.

SHAKEN SWARMS.

"Will some one tell us about the 'shook' or shaken swarms?"

Mr. Lathrop—I have practiced it for a number of years. I always clip the queens, and if I find a colony ready to swarm I set the hive away and put a new one in its place, and shake them from the old hive in front of the new, and let them crawl in.

Do you use old combs or foundation?

Mr. Lathrop—I use either.

Mr. Pierce—I shake all bees and the queen on empty combs on the old stand, set the old hive aside until all bees are hatched out, shake off young bees in front of new hive, take all queen-cells out of the old colony except one, and remove them to a new location.

A Member—Shake all the young bees into the new hive, give them all the working force, and try to get all you can out of the new colony instead of making two. This is for comb honey; for extracting it is not necessary.

Do you shake them before they make preparation for swarming, or wait until they are ready to swarm?

A Member—I never do this unless they are ready to swarm, and I see no difference between this and natural swarming.

Mr. Gross—I have done this for several years, but never before knew the name of it.

Do you always put a new colony on the old stand?

Mr. Gross—If you want a good, strong colony leave them on the old stand.

Mr. Pierce—I don't agree that two weak colonies will store as much honey as one strong one. With the old practice the old colony is removed to a new location. With the new practice we get one strong colony and no increase.

Mr. Huffman—With this process you simply have the old colony in a new hive. If you keep them from swarming won't that be the same thing?

Mr. Pierce—That may be all right if you are always on hand, but you can't do it if you have to be away much.

Mr. Huffman—Put on three top stories.

As a committee on the St. Louis Fair, the executive officers and Mr. Wilcox were appointed.

At the request of the convention Mr. France entertained the members with a song.

WATERING-PLACES FOR BEES.

Considerable discussion was had about watering bees. It was insisted that this is a neglected but very important subject, especially for brood-rearing.

Provision should always be made for watering to keep them out of watering-troughs for cattle. Bees want clean and warm water. If they go to the mud-holes it is on account of the temperature.

"Is it a disadvantage to be near large bodies of water?"

Mr. Thompson found that when bees had to cross a large body of water lots of them were lost, especially when the wind was contrary.

PLACE OF MEETING.

The President suggested a different place of meeting for the next annual convention instead of Madison.

Mr. Lathrop suggested the formation of local organizations to send delegates to the State convention, which was to be continued at Madison.

Mr. Gross thought that the place of meeting could not be changed without amending the constitution to that effect.

The matter was left to a committee consisting of the officers.

FINANCIAL STATEMENT.

Balance in treasury Feb. 5, 1903	$22 22
Dues to State Association, received during the session of convention Feb. 4th and 5th, from 53 members, 50 cents each	26 50
Received from former Secretary, Miss Ada Pickard, Dec. 4, 1902	7 50
	$56 22
Paid Feb. 5th, expenses of N. E. France, as Secretary	2 25
Balance on hand	$53 97

No further discussion or business appearing, the convention, on motion, adjourned. Gus Dittmer, *Sec.*

Honey as a Health-Food is the name of a 16-page leaflet (3½x6 inches) which is designed to help increase the demand and sale of honey. The first part is devoted to a consideration of "Honey as Food," written by Dr. C. C. Miller. The last part contains "Honey-Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by every one who has honey for sale. It is almost certain to make good customers for honey. We know, for we are using it ourselves.

Prices, prepaid—Sample for 2 cts.; 10 for 10 cts.; 25 for 20 cts.; 50 for 35 cts.; 100 for 65 cts.; 250 for $1.50; 500 for $2.75; 1000 for $5.00. If you wish your business card printed at the bottom of the front page, add 25 cts. to your order. Send all orders to the Bee Journal office.

Contributed Articles

The Hive Problem—Uniformity and System.

BY M. A. GILL.

I HAVE read Mr. Aikin's articles on the hive problem with considerable interest, and knowing his great influence among men, and knowing also how prone beginners are to keep changing from one thing to another, and that frequently when the new system is not as practical as the discarded one, I am constrained, at this time, to make a plea for at least uniformity of fixtures.

Periodically, for the past 30 years, men have started out to show by some ideas of their own that the Langstroth hive was not the natural home of bees, and have suggested and put into use other system always more complicated, and just as often has the apicultural lane been strewn with the wrecks of blasted hopes and disappointments.

I know there are many inventors who *think* they have been a boon, and have filled "a long felt want," but I defy any one to show any hive and system that will give control of the bees in a more simple manner, and still winter a larger percentage in so great a number—a system that will allow one person to care for a greater number of bees, and put any more honey on the market at the close of the season. I know there are many who will claim it (we will cut out Doolittle); then show us the man, the system and the *honey*.

Mr. Aikin wants a hive that is the *natural* home for a colony of bees, and by and through his varied and long experience, he thinks he has found it. Oh, how seductive these natural homes for bees are!

Two years ago a man at Fort Collins transferred a colony from under the bench his bees were on, and it was the strongest colony out of his 60. One would say, "Surely, that is the natural home for bees." But, you see, it is not practical.

Two years ago I took a colony from the top of a large air chimney on the Bank building here, and it was the most powerful colony out of my 600. The chimney was full for ten feet, and was much the same kind of hive, *or system*, as described by Mr. Aikin in one of his previous articles, and about as practical. I thought, when taking out that colony, Surely, this is the natural home for a colony of bees, but, then, it is not *practical*.

Again, we took a colony out of a coyote hole, that ran horizontally into a bank on the Union Pacific railroad, and it was stronger than any colony in the apiary, at the time we got it. This, you see, was the Langstroth, or more, perhaps, the "Long Ideal" system. We said, Surely it is the natural home for a colony of bees. But it is not practical. But in my opinion it was about as practical as a system that compels a man, who is running hundreds of colonies, to carry an extra number of hives to put on and take off for breeding purposes. Or a system that is made up of a lot of little bodies of hives filled up with sticks and spaces, that should be filled with great, solid spreads of brood. Surely, with such a system, a man is curtailed from accomplishing what he could with a uniform and simple system.

Mr. Aikin implies in his last article that he has as many as eight or ten different hives, and that he has had them for years. Surely, a man with Mr. Aikin's keen perception has decided long ago which was best. Then why not shake the whole outfit into one system, and then keep more bees, because he can, if everything is uniform? Otherwise his honey-house and store-rooms are more like a department store or museum. And, O the exasperating bother, if a man wants a super, and the first four or five he comes to belong in some certain place!

I want to mention a case to show what can be done with uniformity and system. A widow, who does not live so very far from Mr. Aikin, keeps bees in boxes nailed up out of boards the same size as an 8-frame Langstroth hive. Lath was nailed in for top-bars ¼ inch down from the top of the box. A bottom was nailed on, and a loose cover was improvised. She has no knowledge of bees, but she got a good supply of supers (standard 8-frame Langstroth) and put them on, and then took them off as soon as filled, and in the fall she put $650 worth of honey on the car from 60 colonies. How did she do it? Simply because she had a uniform and simple system, an old box brim-full of bees in the early spring, and the bees were there because the box met their requirements, and was full of breeding space and honey, instead of sticks and spaces.

Honestly, Mr. Aikin, I don't believe she could have accomplished those results with *any other* system. It simplicity met her knowledge of the business.

The hive she used was much the same system as advised by that scholarly gentleman and prince among bee-keepers, Moses Quinby, 50 years ago, for farmer bee-keepers or, in fact, for any one who didn't care to handle combs.

You will, no doubt, say her success was because of the extra-good season. I think not, as she did just as well comparatively three years ago; also one year ago. I think it is because of those good, natural queens in a proper-sized brood-nest, neither too *large* nor too *small*, without any frames, sticks or spaces to interfere with rearing the greatest amount of bees in the least amount of space.

Another illustration: One year ago I bought 26 colonies within three miles from your home. They were in boxes like those described, excepting four in the Littleton hive, which is nothing more nor less than the Heddon system. One colony was dead, and two others weak; but the boxes were packed full of bees by April 15, and I am sure that neither you nor I had any colonies in frame hives to compare with them at that date.

Again, I am confident that these longitudinal boxes were just as strong as if they had been standing upright like the ideal hive you have described in a previous article. But your hive, 30 inches high, is not practical, and my ideal box lying down must have frames in it, as we must have control of the combs, and I will admit that when I put in a set of frames I lessen the possibilities of that colony, and I insist that when you put in two sets of frames and spaces you double the loss in the hive.

Again, my observation has led me to *think, at least*, that a divisible brood-chamber will *not* winter as well in northern Colorado as the regular Langstroth, in the open air. As you know, my preference is for the 8-frame, while you prefer the 10-frame, and you give notice that you may change to a 12-frame.

Let me suggest that just in proportion as you add frames above 8, or at least 9, just in that proportion will you lessen the amount of honey you ship.

If I were living where I wanted a great amount of bees for, say a 20 or 30 days' honey-flow, I should certainly run hives two stories high, for a queen can be rushed for a short time; but out of the thousands of queens I have owned, I have never owned one that could keep more than an 8-frame hive well stocked with brood for five months—the time that is required here to cover the season when bees *must* be strong. I know of 12-frame hives that have slabs of honey in them 5 years old. If they had been in 8-frame hives, and in a careful man's hands, that honey would have been on the market in sections years ago.

I want to say to beginners, and to all who are disposed to be imitators: Watch and wait; and when you see a man who is caring for more bees without help than you are, and is really shipping more honey than you are with your old, reliable Langstroth system, then change, and not till then.

"Blessed be the name of Langstroth."

Boulder Co., Colo.

Rearing Long-Lived Queens and Bees.

BY HENRY ALLEY.

DR. GALLUP is dead. We shall miss him—myself as much and perhaps more than any other reader of the American Bee Journal. I am sorry he passed away so suddenly, and so soon after he wrote his last article for this journal.

If he was still on earth, I could have more heart and more interest in replying to the parting dig the Doctor gave me. I feel obliged to reply to his oft-repeated story, as it appeared in his article on page 277. How often Dr. Gallup has told the same old story in this paper—no less than twice the past winter.

Dr. Gallup says he had two queens from me—that's so. The queens and none of the bees lived through the following month of February. Why not? Now, Dr. Gallup wants it understood by all the readers of the American Bee Journal that the cause of the queens' dying so soon was owing to the manner of rearing them. How many take stock in such an idea?

The two queens sent Dr. Gallup were two as fine queens as were ever reared by any one. They were of the finest stock I ever owned. They were the same strain and reared in the same batch as a good many other queens, and for which I can show thousands of testimonials, many of which have been published in my catalogs. Now, what was the cause of the trouble?

Of course, I cannot say certainly the real cause of two such fine queens turning out as they did. But all the symptoms point to pretty bad management when they were introduced. Why did not other people, who received queens at the same time, do as much kicking as has Dr. Gallup? Perhaps I ought not to say more on this point, as Dr. Gallup is not here to defend himself. He continually harped about my rearing queens in nucleus hives, or nucleus colonies, rather. I have never reared any queens, for sale, by the nucleus system. All my queens are, and always were, reared by the same system that Dr. Gallup recommends, namely, by the strongest colonies to be found. I am quite sure that Dr. Gallup got his first idea on queen-rearing from my writings, as I wrote many articles on this subject before he appeared on the stage.

I notice that quite a number of bee-keepers are using many of my ideas on this subject and claiming them as their own. When I wrote my first book on queen-rearing, some twenty-years ago, an Italian reprinted it entire, except so far as the name of H. Alley was concerned. My name was not mentioned. Probably, being a foreigner, could not pronounce my name, and so it was undoubtedly left out.

I do not like to say to much about myself when replying to attacks in the papers, but the articles by Dr. Gallup and some others compel me to say certain things that appear like tooting my own horn. Isn't it wonderful that I have continued in the queen-rearing business so long, considering that I have reared such infernally worthless queens? Did Dr. Gallup really think that all the queens I have reared were as poor as the ones he has described?

I wish Dr. Gallup could have lived long enough to have visited my apiary. I wish that he or any other man, who took stock in the Gallup statement, could come into my yard just now and see some of the Adel colonies that have those worthless (?) queens. I have queens from one to three years old. The strongest and best colony in my yard, save one, has a queen three years old. Then there are colonies which have queens reared by a *pint* of bees. One colony in particular has a queen reared by less than a pint of bees, and late last September. This queen cannot be purchased, as she is the most promising young queen in my yard. Last August I gave a young man an Adel queen. She was introduced safely. This spring the young man was obliged to dispose of his bees, and I purchased them. I don't believe that a stronger colony of bees can be found in the United States. The hive has eight frames, and everyone of them is filled with brood. This queen, as well as some 40 others, was reared by my new process for rearing queens.

Now, I will give some of the people who know it all, a chance to "arise" and tell us what they know about something connected with bee-keeping.

Last fall I purchased a powerful colony of black bees in an old-fashioned 10-frame Lanstroth hive. One of those hives has a cap large enough to hold a bushel, yes, 5 pecks, if anything. The hive contained but 4 frames and there was nothing above the frames but the cap. The bees had filled the entire thing, from top to bottom with comb and honey, and it all weighed 125 pounds. I managed to get the cap off, and all the bees out of it into the brood-chamber. I never saw a larger colony of bees. It cast a swarm last year and had a fine young queen reared by the swarming process. This, of course, would give the colony one of the very best queens it was possible to have. Well, now, let us see about that part of it. This colony wintered on the summer stand and lost no bees at all during the entire winter. It has always been strong in numbers.

Now comes the point I want to call your attention to. About a week ago I was passing by that hive, and found the bees greatly excited, the same as when a queen has died or has been removed. Sure enough, the queen—a large, fine specimen—had died, as I found her on the ground. She was a young queen, and I could see no reason why she had died so young and suddenly. Now, get right up gentlemen and explain why this swarm-reared, and naturally-reared, queen had died. When you have explained the above please try this one:

Two years ago, I took my team and went on a hunt for a few colonies of bees I much needed. I came across a man who had a few strong colonies in the first pattern Langstroth hives. I bought one, and it was a good one, too. There was a glass in the rear of the hive and I could see that the brood-chamber was crowded with bees. I took a peep at the entrance to watch the bees going out and in, and observed the size of the pellets of pollen they had on their legs. All was satisfactory but one thing, and that was a great objection so far as I was concerned. Right in front of the hive on a board was a large, fine dead queen. I was satisfied that the queen came from the hive I purchased.

When I arrived home I soon found that the colony had very recently lost its queen. I had queens in plenty and I soon fixed the colony up all right. Now, what caused this queen to die, and exactly under the same circumstances as the queen in the other hive died? This colony, like the first one mentioned, had swarmed the previous year, and so the queens were young in both cases. Some one will say the queen was injured in removing the frames. There never was a frame removed from this latter hive till I removed it. And, in the case of the first hive, it is impossible to remove one, as the combs are built crosswise. In a few days I shall transfer the colony to another hive.

I cannot tell why those queens died. Who can tell?

Now, if natural-reared queens die in this way, is it anything strange that now and then a queen reared by artificial methods dies? Why, gentlemen, don't you know that where one queen is reared by natural methods, there are hundreds reared by forced methods?

It's unjust to condemn a queen-dealer and say he doesn't know how to rear queens, for no other reason than that now and then a queen turns out to be worthless or lives but a few months and then disappears, especially after such queens have been thousands of miles in a mail-bag. Bear in mind that the two queens above mentioned never went hundreds of miles by mail, hence it will be seen that they were not injured in that way. Now the two queens that I sent Dr. Gallup were confined in a mailing cage 7 days, and traveled 2500 miles.

As I have before stated, had some of the queens Dr. Gallup reared been sent from California to Massachusetts by mail, they would, most likely, have been as worthless and short-lived as queens that were sent him from Massachusetts.

I have never heard any one else say that Dr. Gallup's queens were wonderful, except Dr. Gallup. He, I am told, had never been largely engaged in bee-culture, and never had reared many queens. No doubt Mr. Doolittle and myself, whose queens Dr. Gallup has so strongly condemned, have reared thousands of queens where Dr. Gallup has reared one. I have spent my whole life in this branch of apiculture, and now, after 40 years' experience, if I cannot rear a queen that will live four months, I cannot help thinking that I have wasted lots of valuable time. Of the 20,000 customers to whom I have sent queens in the last 40 years, I am willing they should say whether Dr. Gallup is right or wrong in his statements.

As before stated, any one can rear hybrid queens such as Dr. Gallup reared, but few can rear hardy, strong queens that will produce beautiful bees and produce lots of honey. Every queen-breeder in the land will bear me out in this statement. Essex Co., Mass.

Spring Feeding of Bees—A Reply.

BY C. P. DADANT.

On page 278, Mr. A. C. Miller finds fault with my method of spring feeding and says that stimulative feeding is "always done at a loss." This is not the first time that I find objections to my methods, and I, myself, often find objections to the method of others. But because one man has not succeeded in a certain direction, it is not at all an evidence that the method is bad, or that others cannot succeed in the same way. For instance, one of our most practical apiarists, Mr. R. C. Aikin, of Colorado, takes all his extracting combs home from his out-apiaries to extract the honey, and returns them after extracting. I would not for a minute think of doing such a thing, and told him, when I visited him, that in my practice this method would be too slow. But he has his reasons for doing it, and they are good. So we are each right, in our own sphere.

When we come to the matter of spring feeding, I want to insist on my methods being correct. The ideas I emit are not theories—untried ideas. The reader will bear in mind that I have worked with the bees since 1868, for years almost exclusively at this business, in from two to six apiaries, and for a long time it seemed to me as if no one else could be trusted with the management of the bees that we possessed, and do it correctly. We have practiced spring and fall feeding in all sorts of ways, not only experimentally, but practically, and on a large scale. Under these conditions, I should be much to blame, if I gave to the readers of the American Bee Journal theories based on mistaken notions or false opinions concerning the habits of the bee.

The present season is a very good one to show the advantages of stimulative feeding in the spring, and when I read Mr. Miller's letter in the evening, we had just been feeding some 60 odd colonies. I say that the present season is a good one for feeding, because it is a very irregular one. In a season when the winter is long-protracted, and the bees are confined to the hive until late, and in which, the crop once begun; it continues uninterrupted, feeding will do harm if begun too soon, and will do no good after the bees have commenced haresting honey. But when the colonies have been breeding as they have this season, a little early, and a change in the weather is causing them to stop, a little judicious feeding stirs them and causes them to continue breeding. If we fed colonies that were heavy with honey, we would make a mistake. If we fed when the days were so unpleasant that the bees that went out foraging would die of cold we would do the bees damage. But the colonies which discontinue their breeding because of a change in the weather, when the weather is so that they can still fly, but find nothing, will be benefitted by stimulative feeding. This is not a theory, it is experience.

Mr. Miller charges me with stating incorrect physiological facts. I am not infallible, neither am I a microscopist, but there are things which any of us can see.

Mr. Miller says, "Except during a peculiar operation which I have termed 'grooming,' bees never show anything which approaches respect or deference for their mother."

What! The very name "king-bee," "queen-bee," given to the queen by the observers of the bee-hives centuries ago, show that every one who had taken any pains to investigate had noticed the wonderful respect, yes, the "deferential treatment," of their mother. They had noticed that as the queen walked on the combs the bees *respectfully* backed out of her way, as soon as they perceived that it was she who was there. The bees *do* show deferential treatment for their mother, just as if she was a "queen" or a "king."

We are, all of us, too apt to make light of the knowledge and of the teachings of the old masters in our art. Only a few months ago, in Gleanings, a Mr. Wright wrote a very interesting article in which he gave, with microscopic studies, some arguments that seemed to overthrow the teachings of Leuckart, Siebold, and Cheshire, on the fertility of drones produced by virgin queens or drone-laying workers. His arguments seemed so irresistible, his ideas so plain, that I concluded at first that he had added some knowledge to the general information on the bee's anatomy. But a few weeks later Mr. Adrian Getaz, in a very short and pithy article, showed that the microscopic diagrams of Mr. Wright were only evidences of the age of the drone in question, and not at all of their greater or less fertility, and that Cheshire, Leuckart, and Seibold, were still standing on impregnable ground with their discoveries.

Our departed friend, Dr. Gallup, told us of an umbilical cord in some queens, as yet undiscovered by scientists. But the umbilical cord proves to be very probably nothing but a portion of the cocoon spun by the insect during its metamorphosis.

Again, a few months ago, a European scientist, Dr. Lambotte, came forward with the assertion that the famous bacillus alvei of foul brood was nothing but a very much scattered and very common microbe, existing all over the world, and we all became very much excited over the possibility of getting foul brood at any time, and without being able to protect ourselves, owing to its being so very common. But this also turns out to be very probably an incorrect observation. I see in the Revue Internationale d'Apiculture an article by F. C. Harrison, in which he establishes plainly some imperceptible differences between bacillus alvei, and bacillus mesentericus *vulgaris* of Lambotte, which he calls Bacillus mesentericus *vulgatus*, after its original discoverer, Flugge. It would appear that there are differences between those two microbes which, although small, would result in about the same conditions as the difference between a venonous snake like the rattle-snake, and the harmless water-snake. Hancock Co., Ill.

The Premiums offered this week are well worth working for. Look at them.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Using Unfinished Sections.

On page 312, Mr. Arthur C. Miller refers to the matter of using unfinished sections, and thinks the secret of the trouble is in putting on sections that still contain honey. Mr. Miller's views are sound on that point, but I think he is in error in supposing that either Mr. Doolittle or myself has missed that point, and I think that Mr. Miller seems himself to have missed the point in dispute between Mr. Doolittle and myself. We are both agreed that the honey should be cleaned out before the sections can be again used to store in; but I hold that it must be cleaned out *before* there has been any granulation; and Mr. Doolittle thinks it can be cleaned out as well after.

There is no disputing the fact that if bees are allowed to rob out the liquid honey in the fall they will make a clean job of it. The fact that I have seen so many cases in which plenty of granules were left in the cells when granulated honey was cleaned out, even when robbed, makes it seem doubtful that the granules can be all gotten out before the bees again store in the sections. If Mr. Doolittle succeeds in that respect, it does not follow that others will. The plain question is this: Can we, in general, rely upon getting the bees to clean out the last vestige of granulation in sections? If Mr. Miller can tell us whether yes or no is the right answer to this question, he will be helping.

An Experience—White and Red Clover, Alfalfa and Buckwheat.

Myself and family are diligent readers of the American Bee Journal. It has been of great help to us in beginning the bee-business. I have often thought to write and tell how I started in the business, and how I came out after two years' experience.

I first bought a good, healthy colony of bees for $5.00; then I let a man bring his bees (a small colony) from the city to our yard, for which he gave me one prime swarm and 24 pounds of honey—just for the rent of the ground. Then we (I mean my husband and I) bought five colonies at $2.30 a colony, and got but two swarms last season. I also divided one colony that threw out a swarm, and, when I hived it it immediately went back to the old colony.

Last winter was not a hard one on bees in our locality, but we lost three colonies, two from mice destroying them. One smothered by the snow, while my husband was sick. But we have nine good colonies left.

My, what an experience I had with our first swarm. It settled very high in an old apple-tree, the limbs were very far from the body of the tree, and my husband was in town. What was I to do? I sent my "twin swarm-catcher" to the neighbor's, and he came, but what did he do? He said he was afraid of bees. I then, with the efficient aid of my 16-year-old daughter, fixed our new hive, climbed the tree, and with a saw, rope, and water, sawed the limb off and let the bees down to my daughter, but they immediately went to a higher limb. I was all tired out. Just then a perfect stranger came to the house for dinner. I then asked him if he would help me get the bees down. He said he was afraid of bees. As I had no veil or bee-fixtures, I took one of my lace curtains to tie over his head, and he got them to the hive after I cut the limb off. We saved the swarm all right with not a sting.

The first of last September we had two swarms, and saved both, but the next day a swarm came out and left.

Bloom is heavy, and the bees are very busy this week. Last week was cold and wet. Last year one colony was prepared for comb honey, and I believe it stored 50 pounds, while some others had no surplus at all; and one was even entirely without honey, but we fed it till buckwheat came, when it stored nearly enough to winter on.

1. Why did bees not work on white clover last year?

2. The red clover was full of bees, but there was none on white clover.

3. We have a lot sowed to alfalfa, but there was no honey in it last year; we did not cut it.

4. Will buckwheat yield nectar if sowed now, the first of May? Mrs. Mary E. Houser.

Howard Co., Ind., April 29.

Answers.—1. Probably because there was no nectar in it. An abundant bloom of white clover does not always mean a large honey crop, for sometimes it does not secrete nectar. Just why, it is difficult to say, but due perhaps to certain atmospheric conditions. A cold, wet season will very seldom give much nectar.

2. So your bees worked on red clover, did they? You must have some of the long-tongued strain of bees. I wonder if red clover will secrete nectar when white clover will not.

3. There has never been any report of alfalfa yielding any honey east of the Mississippi. In fact, there has been no general success in getting it to grow luxuriantly in the East. We are told by the experiment stations that alfalfa will succeed in the East if the land be inoculated with some of the soil from the regions where alfalfa is a success. Let us hope that when it gets to growing in the East as it does in the West—if it ever does—it will then be as good a honey-plant as it is in Colorado.

4. Buckwheat will probably not yield nectar as well if sown the first of May as later, but it is not always a dependable nectar-yielder, no matter when sown.

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

IMPORTS OF HONEY AND BEESWAX.

When Uncle Sam talks about imports he speaks by the card, and we can trust his figures. He collected money on so many gallons of honey. (Under a corrupt service import figures are too small—importers striving to pay on less goods than they get in with; but I guess we can trust our service at present.) And so beeswax importation decreased quite a bit from 1901 to 1902. The official figures speak of gallons, while we mostly think of honey in pounds and tons. Translated into tons, just a thousand tons, came in in 1901 and only 920 tons in 1902—or say a hundred carloads declined to 92 carloads. Not only did the amount of wax double, but the official price went up from 26 cents a pound to 28. On the other hand, the official price of honey went down from 4 cents a pound in 1901 to 3 cents a pound in 1902. Page 243.

HENRY ALLEY AND HIS PICTURE.

What a nice picture of Henry Alley! The smile seems to say, "Lots of queens on hand, and lots of orders coming in." No, I'll take that back for repairs. The smile seems to say, "There are things in the universe even more pleasant to think of than orders and queens." Page 243.

FOUL BROOD BY MAIL.

My estimate of N. E. France had grown considerably by the time I got through the second paragraph of his paper on foul brood. Only a few rare persons can talk on an old, worn-out, and not very nice subject, and interest us at once. If Mr. France knows a case where five queens from a foul apiary infected all five of the colonies to which they were introduced, it is about time some of us awoke from our slumbers. Whether the disease traveled in cage, queen or candy, it came by mail—and came as a return for the unsuspecting apiarist's dollar. Page 244 and 261.

THE PRESENCE OF DRONES IN A COLONY.

☞ But, Mr. Dadant, it is not quite *always* that we can have the warming presence of drones answered by workers just as well. The first night after swarming finds workers reared in the drones place mostly all gone, while most of the drones are where they are needed. I will freely grant to you, however, that this is but a small item to the drone's credit—and that the drone's practical value as a heat-producer is liable to great exaggeration. There is, however, another little unsettled point which may yet prove of some importance. Will 50,000 bees in the flush of the season *feel* *quite satisfied in their own minds* if no drones are among them? Page 246.

OVERSTOCKING A LOCALITY.

To Miss Wilson's excellent analysis of the rights and wrongs of overstocking I would add this: There might be five grocers in one little town and yet the public be so poorly served that it would be altogether right, proper and desirable for an honest, up-to-date, live man to come in and start a grocery there. A corresponding state of things in apiculture is hardly supposable. To get at the moral point, I suppose that in almost every case a crowding grocer salves his conscience with the belief that the public are going to be benefited. The crowding bee-man comes much nearer to being a hog, pure and simple. Page 247.

FEEDING BEES IN WINTER.

And here is a beginner who has five colonies on a shelf in a nice, warm cellar. He has found he can make them come down and take feed—has done so several times, and says he is going to do so more. This is because (or say partly because) the colony he is particularly monkeying with—he kind 'o thinks it may be a little short of food. Don't, Mr. A. M. Deitz! I hope you will tolerate me in saying this. If you *really* are apprehensive of starvation find out for sure; and then give them food once for all. I know its tough to ask a boy with the bee-fever to let bees alone; but their winter quiet should not be intruded on. Pretty sure to do them harm, and may kill them altogether. Page 254.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal,
or to Dr. C. C. Miller, Marengo, Ill.

Wants Honey First, then Increase.

I have been feeding my bees all spring and have them pretty strong, so much so that I have had to put on the second story so they would have room to cluster on cold nights. Now, I want to get all the white clover section honey I can. I saw in the Bee Journal that to double the story is not a good plan as they will fill the upper story first and will not put it in the sections. What I should like to know is: How will it do to take the upper story off and make a colony out of them? As I desire to increase my colonies, what would you advise? I want all the honey I can get first; increase is a second consideration.

ILLINOIS.

ANSWER.—Making a swarm of one story will work well, but you may get a little more honey to work a little differently. When it comes time to put on a super, sort out the eight combs that have in them the most sealed brood, leaving these on the old stand. Take the other eight combs with only enough bees to care for the brood, and set on a new stand. On this same new stand you can also put the story that you take from one or two other colonies, giving a queen or queen-cell. You can get extracted honey from this colony, or two weeks later you can reduce it to one story and work for comb.

◆

Transferring Bees and Rearing a Queen.

I have a few colonies of bees in odd-sized hives which I wish to transfer to Hoffman frames. I want to increase all I can. How would this do? On a warm day about 10 o'clock, move the old hive and set a new hive in its place, with one-inch starters and a frame of young brood. Would there be enough bees from the old hive to care for the brood and rear a queen?

NORTH CAROLINA.

ANSWER.—Better not try it. It would be a costly way of rearing a young queen, and you wouldn't be sure of a good queen then. You would get all the field-bees of the old colony, greatly crippling that, and old bees are not the right kind to rear queens.

◆

A Beginner's Questions.

1. I am a beginner in the bee-business. I have 2 colonies which wintered finely. They are hybrid bees and I should like to know if it would be right to get an Italian queen and kill the old queen and give them the Italian queen. I have heard that they often kill the new queen when doing that way.

2. Are all your Italian queens (that you sell, the tested and untested queens) fertile, i. e., have they been mated by Italian drones?

3. In one of our hives the combs are molded and we left them in thinking that the bees would clean them out, but they are gathering honey now and the comb is the same. Had we better cut the molded comb out or not?

4. When I put on supers ought I to put on two at one time?

5. Do bees get any honey, or only pollen, out of dandelion blossoms?

6. Are all Italian queens long-tongued, i. e., all genuine Italian queens.

7. What is the best way to get a swarm of bees that are flying? Will throwing sand on them bring them down?

8. If the queen has clipped wings when they swarm, will she crawl a little way from the entrance and then will all the bees cluster about her so that you can put them in a hive?

9. Are Italian bees much better than hybrid bees?

10. Do bees gather much honey from wild cherry blossoms?

MICHIGAN.

ANSWERS.—1. Yes, that would be all right. There are more or less cases of loss in introducing queens; by following the instructions that come with the queens you will generally succeed.

2. I am rearing queens only for my own use, but when you buy a queen of any kind, unless it is distinctly stated that she is a virgin queen, it is always understood that she is mated and laying. If untested, there is no agreement as to the kind of drone she has met. If tested or warranted, it is understood that she has met an Italian drone, unless stated to the contrary.

3. Unless the combs are very bad indeed, I think you will find that the bees will clean them before the brood-nest spreads to the moldy combs.

4. Only one.

5. Lots of honey.

6. They vary.

7. Let them alone and they will cluster of themselves.

8. No, if you let them alone, the queen will generally go back into the hive of her own accord. Catch the queen, put an empty hive in place of the old one, and then when the bees of the swarm come back and begin to run into new hive, let the queen run in with them.

9. Some hybrid bees are just as good as Italians, but when you breed from pure stock you are more sure of having the same blood continued than when you breed hybrids.

10. I don't know, but I think likely they do.

◆

Preventing Ants—Fumigating Honey—How Many Swarms for One Hive.

1. I have my hives standing on elm blocks, 2 feet by 12 inches, two blocks under each hive, and lying down, with a couple of pieces of plank crosswise. Is there any danger of ants getting into the blocks and afterward bothering the bees? (The ground is low, and not sandy.) If so, how shall I prevent it?

2. How do you fumigate sections filled with comb already in the supers?

3. How many hives would you advise a person to run into a hive?

WISCONSIN.

ANSWERS.—1. In the South ants are very troublesome, but not often as far north as Wisconsin. I have, however, had bottom-boards completly honey-combed by large black ants, but only two or three cases. If you should fear any trouble of this kind, you could probably avoid it by painting with coal-tar. The probability, however, is that you will not need to take any precautions.

2. Pile up the supers, set on top a saucer with two or three tablespoonfuls of bisulphide of carbon, set an empty super over, and cover up 24 hours. But don't bring a light anywhere near or you may get blowed up.

3. One, if it's strong enough; three, if weak enough. Generally you will not double up prime swarms, but two or three second swarms may generally be united to advantage. It is better, however, not to allow second swarms.

◆

Feeding Burnt Honey.

1. I have some honey which is burnt a little. Will it be all right to feed it to the bees in spring?

WISCONSIN.

ANSWER.—Yes, it will be all right to feed such honey when bees are having daily flights, but it would be death for wintering.

◆

Dividing for Increase.

I am keeping bees on a small scale, but have been at it about 12 years, and the most I have had was 34 colonies. I have read "ABC" and some others, and have read journals. Most of the time I run for comb honey in pound boxes. I have prevented swarming to a great extent, until I have almost a non-swarming class of bees. Now I want to increase, but I want to get honey, too. The flow is on hand now.

1. Can't I divide as soon as the flow is over, and build up by the next, which comes about June 15?

2. Can I introduce queens to the queenless parts safely any time I like?

3. When would I better divide to get ready for the basswood, which will be in about June 15?

ARKANSAS.

ANSWERS.—1. Whether you can divide and build up in time for the June 15 flow depends largely on the length of time you will have between meals. You don't say how long before June 15 the first flow ceases. If you have only a week to build up, you can hardly make it, but you might in three.

2. Yes.

3. I'm not sure I fully understand your question, but if you have only a short time to work between harvests, then act accordingly. If you have a long enough time, you can make a new colony from each old one. If there isn't time enough for that, then draw only enough brood to make one new colony out of each two old ones. If the time is too short for that, then draw only one or two combs of brood and bees from each old one, and make a new one out of several old ones.

◆

Size of Hive—Shade—Best Bees.

1. In a country where the seasons are wet and dry—very wet in winter and very dry in summer—and where the temperature never goes below 27 above zero, and rarely higher than 95 in the shade in the summer, where sunstrokes are unknown, would you recommend deep, shallow, or medium hives?

2. Considering the above climatic conditions, would you recommend that a roof be placed over the hives on the ground for shelter?

3. Keeping our climate in mind, which strain of bees would you recommend—golden, red clover, leather-color, or Carniolan? I want the gentlest and best workers. CALIFORNIA.

ANSWERS.—1. For extracted honey, perhaps little choice; but for comb the medium or shallow would be better.

2. Hardly, except for sake of sheltering the bee-keeper from the sun while at work at the hives; and for that purpose a covering of boughs or vines would be sufficient.

3. It isn't so much a difference between golden, red-clover, etc., as it is to have the best of either one that you do have. The best of any one of them is better than the poorest of any other kind. Possibly you might find among the leather-colored something that would suit you as well as any, and there is nothing to hinder any one of the other three kinds from being red-clover bees. It will be no harm for you to try more than one kind.

◆

Leveling Hives—Drone-Comb.

1. If the hives are not level would the brood reared be all the same size?

2. How can drone-comb be prevented best? Will cutting out and putting in worker foundation do?

3. When is the best time to cut out drone-comb to prevent more being built?

I have no spare worker-comb as I have just started keeping bees, with two colonies. MANITOBA.

ANSWERS.—1. Yes.

2. The best way to prevent drone-comb is to fill the frames with worker foundation. If you have combs with patches of drone-cells in them, there is no better way than to cut out the drone-comb and put in its place patches of worker-comb. Foundation will do, but is more troublesome. It would be worth while to cut up a frame of good worker-comb for patching, and in its place get another comb built on foundation.

3. It doesn't matter when, if you fill the whole with worker-comb· only it will be easier to do it in spring when the comb is empty. If you want to try to get the bees to build worker-comb where you have cut out the drone-comb; have the building done by a colony having a young queen, and the weaker the colony the more sure you will be not to have any drone-comb built.

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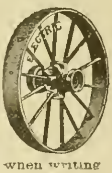

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FROM MANY FIELDS

Wintered Well—Prospects Good.

Bees wintered well here in southern Wisconsin, coming out in good shape. They are as strong as I ever saw them at this time of the year, but the spring has been very bad for them so far, April being very wet and cold. They get about two days to work every week.

Last season was a bad one. There was too much rain during the spring and summer up to the middle of July. They worked well after that, storing 80 pounds of extracted honey to the colony. It now looks as if we would get twice as much this season. I never saw white clover as thick every place—in the fields, pastures and meadows—as it is now. Of course, we can not tell much about the honey part of it, but there is a good show for it. We will be able to tell more about it when we get it in barrels or shipping-cases.

It has been fine weather for four or five days. Plums are in full bloom, and the bees are working well. I have 22 colonies in good shape, and will have 6 or 8 more soon.

Grant Co., Wis., May 11. U. S. BOYD.

Look for Fine Honey-Flow.

The first of May our bees began bringing in honey. They are doing well, and the flow in honey is heavy. No trouble to get queen-cells built. Rearing is going on finely. The weather is dry and fine; there has been considerable wind, but the bees brought in the honey just the same. Many colonies are preparing to swarm. We look for a fine flow of honey and rapid work from now on.

Pickens Co., Ga., May 11. T. S. HALL.

A Dry and Silent Time.

Drouth. Nothing quite like it known here before in planting time. Seeds won't come up—and my apiary some of the time (bees in tolerable order, you understand) is strangely silent. E. E. HASTY.

Lucas Co., Ohio, May 20.

Cold and Unfavorable.

The prospects are not very favorable for a good honey crop, as we are having a very long drouth. We have had no rain for almost four weeks. The bees are barely making a living. The weather is so cold—we have had but one warm night this spring. It was very

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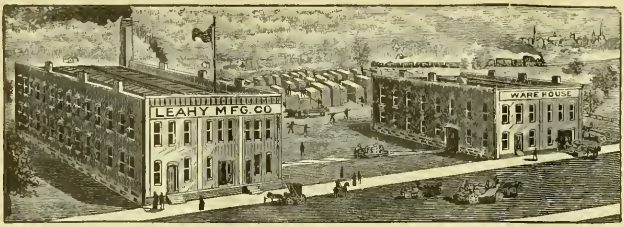

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wet and cold the latter part of March up to the middle of April. The bees got very little good from the apple-bloom. We are looking for a good honey-flow when our crimson clover blooms. We have about 30 acres of it. It is looking fine, and will be out in full bloom in a week or ten days. There is not much other clover, as most of it froze during the winter. I have a few acres of alsike, and there may be some little white clover along the roads and fences. L. A. HAMMOND.
Washington Co., Md., May 11.

Feeding in Sauce-Dishes.

As I have not seen or read of anybody feeding my way, I will describe it. I got some sauce-dishes, ordinary size, at 50 cents per dozen, and put in them two small pieces of corn-cob, put a super on the hive, put in the dish, put in the syrup, and there you are.
Mason Co., Ill. FRED TYLER.

Working in the Third Super.

My bees are doing well. I have some colonies that are working in the third super. I hived a swarm two weeks ago, and they have filled two supers, and are now working in the third.

The American Bee Journal is a great help to me. LUTHER PRESSWOOD.
Polk Co., Tenn., May 11.

Bee-Keeping in Texas.

I think the bee-business will soon be good in this part of Texas, for it is a good country to grow lots of alfalfa. This is the finest upland country in the world, and cotton is the best nectar-yielding plant in the world. It secretes it at the base of the bolls and squares, and on the under side of the leaves and in the blooms. It, together with alfalfa, will make this a fine bee-country. I produced 4000 pounds of honey last year. I have 72 colonies at present, but they are badly neglected on account of other business. I think I will have an exhibit at the World's Fair. I have collected the vessels for it. J. M. HAGOOD.
Delta Co., Tex., Feb. 9.

A Cold, Wet Spring.

We are having a foggy spell of weather just now, when the bees should be piling in the honey from black sage. Of course, the bees are storing some honey in the warm part of the day, but unless it clears up soon there will not be nearly as much black-sage honey as expected. Bees do better this year away back from the coast, above the fog. There is

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no telling how much honey they will store in June from white sage, silver sage, wild buckwheat, and other flowers.

Black sage honey is water-white when gotten separate from that of other flowers. Other sages yield white honey, but it is not as clear as the black.

This is fine, growing weather, and we may make up for our present loss later on. We had a bad season to build up our bees, there being so much rain and cold weather.

The bees are using nearly every cell of old honey, thus lessening the danger from foul brood. We have some of it yet around in the rocks and trees waiting for a dry year to scatter it. Bee-keepers have to be on their guard all the year around in California, although the danger is less during the honey-flow. Many counties in the northern part of the State are in danger of the "old bear" (foul brood), nothing being done to keep it from spreading. Only counties having ten or more bee-keepers or property owners entered can have an inspector appointed *under the law*.

E. ARCHIBALD.

Los Angeles Co., Calif., May 11.

Unfavorable Spring.

So far this has been an unfavorable spring for the bees. It has been cold, windy, cloudy and wet, most of the time. There were only a few days that they could get anything outside the hives, and nearly all the colonies had to be fed to keep them alive. It rained heavy night before last. Creeks and Zumbro River are high to-day, and overflowing, doing much damage to crops. Clover looks nice.

C. THEILMANN.

Wabasha Co., Minn., May 13.

Feeding Beet-Sugar.

Bees wintered well with only about 2½ percent loss. I am feeding some now. In an article on page 298, there is something about cane-sugar. I have fed 400 pounds of beet-sugar since last October. I got it at the factory and fed it with no bad results. There is no lime in it to give bad results. Beet-sugar has the appearance of being dirty, while cane-sugar has not.

W. O. DARNELL.

Weld Co., Colo., May 11.

Cotton a Good Honey-Plant.

My bees are doing well, storing honey right along. I fed them from Feb. 1 until May 1, and they are in better condition than is usual at this time of year. They cast large swarms, and look healthy. I have had 14 swarms, and they go right to work. I am looking for a big honey crop, and hope we will not be disappointed. Cotton is one of our best

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Yours respectfully, E. K. MEREDITH.

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Your queens are fully up to standard. The honey queen that you sent my brother takes the lead. She had a rousing colony when put up for winter. The goldens can be handled without smoke or veil. Very truly yours,

JOHN THOEMING.

Notice. — No tested stock sent out before May 15. Send money by P. O. Money Order or Express Order. **D. J. BLOCHER,**

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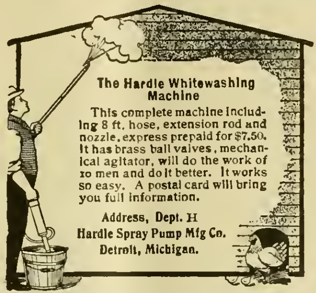

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	5lb	10lb	25lb	50lb
Sweet Clover (yellow)....	$ .90	$1.70	$4.00	$7.50
Alsike Clover	1.00	1.80	4.25	8.00
White Clover	1.50	2.80	6.50	12.50
Alfalfa Clover	1.00	1.80	4.25	8.00

Prices subject to market changes.

Single pound 5 cents more than the 5-pound rate, and 10 cents extra for postage and sack.

Add 25 cents to your order, for cartage, if wanted by freight, or 10 cents per pound if wanted by mail.

GEORGE W. YORK & CO.
144 & 146 Erie Street, - CHICAGO, ILL

$5 TO START YOU IN BUSINESS
We will present you with the first $5 you take in to start you in a good paying business. Send 10 cents for full line of samples and directions how to begin.
DRAPER PUBLISHING CO., Chicago, Ills.

Italian Queens,
Bees and Nuclei.

We have a strain of bees bred specially for honey-gathering and longevity, at the following prices:

One Untested Queen.....	$1.00
One Tested Queen	1.35
One Select Tested Queen.	1.50
One Breeder Queen	2.50
One-Comb Nucleus (no Queen	1.40

Tested ready now; untested in May. Safe arrival guaranteed. For price on Doz. lots send for catalog. **J. L. STRONG,**
16Atf 204 E. Logan St., CLARINDA, IOWA.
Please mention Bee Journal when writing

The Danz. Hive—
The Comb Honey Hive.

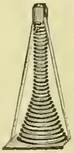
We sell it. We are authorized jobbing agents for THE A. I. ROOT CO., for Michigan. Send us a list of the goods you want for this season, and let us quote you prices. Beeswax wanted. Send for catalog. **H. M. HUNT & SON,**
10A17t BELL BRANCH, MICH.
Please mention Bee Journal when writing.

Wanted to Sell.

New and Second-hand **Comb-Honey Supers**, both 8-frame and 10-frame size, at half-price or less. Some have sections and drawn comb. Either section-holder arrangement or T supers can be furnished. Hoffman worker-combs wanted; also 5-gal. square tin cans.
22A2t F. B. CAVANAUOH, Galt, Mich.
Please mention Bee Journal when writing

If the Top Wire
in your 58-inch stock fence will not bear the weight of 20 men without breaking, give us a trial order.
PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.
Please mention Bee Journal when writing

Queen-Clipping Device Free!



The MONETTE Queen-Clipping Device is a fine thing for use in catching and clipping Queens' wings. It is used by many bee-keepers. Full printed directions sent with each one. We mail it for 25 cents; or will send it **FREE** as a premium for sending us **One New** subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device. Address,
GEORGE W. YORK & CO.,
144 & 146 E. Erie St., - CHICAGO, ILL.

Wanted to Buy
unlimited quantities of ABSOLUTELY PURE **BEESWAX.** Must be nice. Best prices paid, either cash or in Supplies. Address at once,
C. M. SCOTT & CO.,
1004 E. Washington St., INDIANAPOLIS, IND.
15Atf Please mention the Bee Journal.

If you want the Bee-Book
That covers the whole Apicultural Field more completely than any other published,
send $1.20 to
Prof. A. J. Cook, Claremont, Cal.,
—FOR HIS—
"Bee-Keeper's Guide."
Liberal Discounts to the Trade.

We are the Largest Manufacturers of Bee-Keepers' Supplies in the Northwest

Send for catalog.

MINNESOTA BEE-KEEPERS' SUPPLY MANUFACTURING CO.
Charles Mondeng, Prop.

Minneapolis, Minn.

We have the Best Goods, Lowest Prices, and Best Shipping Facilities.

Please mention Bee Journal when writing.

California! If you care to know of its Fruits, Flowers, Climate or Resources, send for a sample copy of California's Favorite Paper—
The Pacific Rural Press,
The leading Horticultural and Agricultural paper of the Pacific Coast. Published weekly, handsomely illustrated, $2.00 per annum. Sample copy free.
PACIFIC RURAL PRESS,
330 Market Street, - SAN FRANCISCO, CAL.

For Sale at a Bargain!

45 8-frame dovetail **HIVES**, (complete except frames) about a dozen of them new, and balance but slightly used; 180 8-frame Ideal supers with fences, nearly all new; and 2000 Ideal (3⅝x5x1½) sections, never opened; hives and supers painted one coat. $40.00 takes the lot; worth $100. **C. H. McNEIL,**
21Atf 719 South 2d Ave., MAYWOOD, ILL.

Please Mention the Bee Journal when writing Advertisers *****

honey-plants, and if the boll-weevil doesn't destroy the cotton we will come to the front this year. I want Texas to roll up one of the biggest honey crops this year that there has ever been. MRS. C. R. WEST.
Ellis Co., Tex., May 15.

Appreciates the Bee Journal.

I am very much interested in the American Bee Journal, as it has helped me along very much with my few bees. It has been as good as a text-book; in fact, I have had nothing else but the Bee Journal, and when I commenced bee-keeping two years ago I did not know the first thing about bees.
British Columbia, Canada. J. E. CARR.

Bee-Keepers' Ups and Downs.

Since my report of March 15th, on page 285, bee-keepers have had a lot of "ups and down," mostly "downs." Such weather, oh my! To say it has been bad would be putting it mildly. The mercury has rarely gotten above 50, and only once as low as 12 above zero. But it seemed to be inclined to want to stay not much above that, for the greater part of a week. On May 2, bushels of ice still remained along tree lines, where the broken limbs had fallen, borne down with the ¾ inch of ice accumulated on them. Our town has been noted for its shade-trees, but the tornado of last June blew down everything that wind could break, and now this ice-storm has stripped the limbs of what remained, giving them the appearance of that starved-rooster trademark on the Aultman-Taylor thresing machine. Bees had worked some on the willow bloom, the day before the storm began, but all was brown after the ice had gone off.

Plums and cherries are now in full bloom, and bees did good work on them yesterday, but to-day it is wet, having rained all night and at it yet. Dandelions are giving some pasturage where the bees can get to them. Apple-bloom will be out this week. Red-clover bloom gave the bees a picnic for a part of two days, which is about all they were able to get from the flowers, on account of the condition of the weather.

We have one "plant" here which flowers night and day, winter or summer, which they work on whenever the weather is warm enough, when nothing better is to be obtained. This plant is located about three hundred yards from my bee-yard and on a fine April afternoon, I noticed my bees working lively, and a glance told me they were at work on the flowers of this plant. I had no more than

Bee-Supplies
G. B. LEWIS CO'S GOODS and everything necessary for handling bees. The very best of goods, and largest stock in Indiana. Low freight-rates. Catalog free.
C. M. SCOTT & CO.,
1004 E. Washington Street,
49A26t INDIANAPOLIS, IND.

Special Decoration Day Rates
over the Nickel Plate Road, at one fare for the round trip, within a radius of 150 miles from starting point. Tickets on sale May 29th and 30th, good returning from destination to and including June 1st, 1903. Three trains daily in each direction between Chicago, Valparaiso, Knox, Fort Wayne, Fostoria, Findlay, Cleveland, Buffalo, Erie, New York City, Boston and New England points. Fast time and low rates. Meals on American Club Plan, ranging in price from 35c to $1.00, served in Nickel Plate Dining-cars; also service a la carte. Chicago Depot, Harrison St. & Fifth Ave. City Ticket Office, 111 Adams St., and Auditorium Annex. For particulars write John Y. Calahan, General Agent, 113 Adams St., Room 298, Chicago. 4—21A2t

noticed them when a little girl appeared and said her pa wanted to see me. (Her pa is the owner of this plant—the miller.) I expected to see an angry Dutchman, when I got over there, but I didn't. They were grinding barley and wheat-screenings, and running the "chop" into a wagon-box out-side the building, and the miller said bushels of bees must have been buried up in the meal in loading, and sent for me out of sympathy for the bees. Rain and cold followed for several days, and they have not bothered them since.

I tried to make a test as to the benefit of giving bees a winter flight, and returning them again to the cellar. Sickness, bad weather, and a complication of other matters, and the benefits so slight, if any, so far as I can determine, made it impossible to be anything like sure about it. I put the balance (90 colonies) of my bees out the last two days of March, and had it not been for several colonies-needing feed, they would have been better off to have stayed in the cellar several weeks longer.

In general, my bees are in good condition, having lost 6 colonies out of 96, three of which were in poor shape on cellaring them. One was queenless, being a united colony, and two had drone-laying, old queens. Very few bees are left among those who did not feed last fall, or on taking them out this spring. One man near me has but two good colonies and two weaklings left from a yard of 26, most of them starving during the last recent ice-storm. I bought most of his hives with combs, and on cleaning them up some had as many as six frames with brood in, three or four frames being nearly solid with capped brood. F. W. HALL.

Sioux Co., Iowa, May 10.

CONVENTION NOTICE.

Texas.—The Texas Bee-Keepers' Association meets in annual convention at the Agricultural and Mechanical College, at College Station, Texas, July 7 to 10, inclusive, during the Texas Farmers' Congress meetings. Cheap excursion rates. Large crowds. A good time. Learn a heap. Meet your fellow-men, and talk. Exhibits of all kinds of stuff. Premiums of all kinds awarded. Come, and bring what you have, and take home some of the premiums. You are invited. Be sure to be there. July 7 to 10, 1903, at the A. & M. C. of Texas, College Station.

Hunter, Texas. LOUIS H. SCHOLL, Sec.

Tennessee Queens.

Daughters of Select Imported Italian, Select long-tongued (Moore's), and Select, Straight 5-band Queens. Bred 3¼ miles apart, and mated to select drones. No bees owned within 2½ miles; none impure within 3, and but few within 5 miles. No disease. 30 years' experience. WARRANTED QUEENS, 75 cents each; TESTED, $1.50 each. Discount on large orders.

Contracts with dealers a specialty. Discount after July 1st

Send for circular.

JOHN M. DAVIS,
9A26t SPRING HILL, TENN.

Christian Scientists'

meeting in Boston, June 28th to July 1st. It will be to your advantage to obtain rates applying over the Nickel Plate Road before purchasing elsewhere. No excess fare charged on any of our trains. Tickets on sale June 25, 26 and 27. Final return limit Aug. 1. Call on or address John Y. Calahan, General Agent, 113 Adams St., room 298, Chicago, for particulars as to stop-overs, train service, etc. 'Phone Central 2057. 7—22A5t

DAIRYMEN ARE DELIGHTED to meet those who work for us. Cow keepers always have money. We start you in business. You make large profits. Easy work. We furnish capital. Send 10 cents for full line of samples and particulars.
DRAPER PUBLISHING CO., Chicago, Ills.

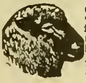
Apiary FOR SALE
AT A SACRIFICE.

During my travels as State Inspector of Apiaries, I found an excellent opportunity for some bee-keeper to make an investment. Mr. Wm. Wray, of Ashley, Mich., died last fall and left an apiary of 100 colonies, nearly all Italians, in chaff hives, on American frame combs built on wired foundation. There are reasons why they will be sold at a sacrifice. There is no one to take care of them, and some of the colonies are slightly infected with foul brood. Of course these bees cannot be sold and shipped all over the country, but if some man could buy them and manage them right where they are, he could make some money. Each hive contains 11 combs, most of them overflowing with bees, and no colony of the few infected contains more than a few cells of foul brood—not enough to affect the amount of surplus. There are 80 extracting-supers full of empty comb, 14 supers with frames filled with wired foundation, 70 queen-excluders, 12 old empty hives, 12 new hives, and supplies to make 12 more hives, a 2-frame Cowan reversible extractor, besides other articles too numerous to mention.

Ten acres of land leased from the Grand Trunk R. R Co., and a small dwelling-house of 6 rooms, and a honey-house, will be sold. No reasonable offer will be refused, but it must be made AT ONCE. Write to
MRS. WM. WRAY, Ashley, Mich.

The above advertisement was written and vouched for by W. Z. Hutchinson, State Inspector of Apiaries for Michigan. The location is fine.

Please mention Bee Journal when writing.



SHEEP MONEY IS GOOD MONEY and easy to make if you work for us. We will start you in business and furnish the capital. Work light and easy. Send 10 cents for full line of samples and particulars.
DRAPER PUBLISHING CO., Chicago, Ills.

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Mount Union College

—:—

Open to both sexes from the beginning. Founded in 1846. Highest grade scholarship. First-class reputation. 25 instructors. Alumni and students occupying highest positions in Church and State. Expenses lower than other colleges of equal grade. Any young person with tact and energy can have an education. We invite correspondence. Send for catalog.

MOUNT UNION COLLEGE,
Alliance, Ohio.

Please mention Bee Journal when writing.

65 Best Queen of Sixty-five 65

BELLE PLAINE, MINN, April, 1903.

MR. ALLEY:—I have a queen received from you in 1900. Her bees are the best honey-gatherers of an apiary of 65 colonies in which are queens from different breeders—natural queens —as Dr. Gallup calls them. The Adel queen is the best of the lot. C. J. OLDENBERG.

A Tested Adel Breeding Queen and my new book giving result of 40 years' experience in rearing queens, sent by mail for $2.00. Warranted Adel queens, each, $1.00. Safe arrival guaranteed. Send for price-list of queens and prospectus of book.

20Atf HENRY ALLEY, WENHAM, MASS.

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BEE-SUPPLIES!
ROOT'S GOODS AT ROOT'S PRICES.

Everything used by bee-keepers.
POUDER'S HONEY-JARS. Prompt service. Low Freight Rates.
NEW CATALOG FREE.

WALTER S. POUDER.
512 MASS. AVE. INDIANAPOLIS, IND.

Please mention Bee Journal when writing.

HONEY AND BEESWAX

MARKET QUOTATIONS

CHICAGO, May 7.—The past winter and present spring have been a disappointment to producers and dealers in honey, in that the consumption has been away below the average of the past decade. Choice to fancy comb is held at 15@16c per pound, with off grades at 2@5c less per pound. Extracted, white, 6@7c; ambers, 6@6½c; dark, 5½@6c. Beeswax in good demand at 32c. R. A. BURNETT & CO.

KANSAS CITY, May 28.—The supply of comb honey is about exhausted. The demand good. We quote you as follows: Fancy white comb, 24 sections, per case, $3.50; No. 1 white comb, 24 sections, $3 40; No. 2, white and amber, per case, $3.00@3.25. Extracted, white, per pound, 6@6½c; amber, 5½c. Beeswax, 25@30c.
C. C. CLEMONS & CO.

ALBANY, N. Y., Mar. 14. — Honey demand quiet; receipts and stock light. Comb selling, light, 15c; mixed, 14@15c; dark, 13@14c. Extracted, dark, at 7@7½c. Beeswax firm, 30@32c.
H. R. WRIGHT.

CINCINNATI, Apr. 27.—Little demand for comb honey at present; fancy white sells at 15@16c in a small way. We quote amber extracted at 5½@6½c; white clover, 8@9c. Sales not as lively as expected this season of year. Cuban extracted is offered on all sides, and future prices are awaited with intense interest. Beeswax strong at 30c. THE FRED W. MUTH CO.

NEW YORK, May 21.—Comb honey trade exceptionally quiet, very little doing. Fancy stock not plentiful and is sold at 14c. A large supply of other grades on hand, which we are quoting at from 11@13c, according to quality, and in large lots make concessions from these prices. Extracted, unusually quiet, and prices show a downward tendency all along the line. Beeswax, firm at from 30@31c.
HILDRETH & SEGELKEN.

CINCINNATI, May 19.—The demand for comb honey is nearly over, but as the stock is almost exhausted, prices keep up. The demand for extracted has not changed whatever, and prices are as follows: Amber in barrels, 5¼@5½c; in cans, 6@6½c; white clover, 8@8½c. Beeswax, 28@30c. C. H. W. WEBER.

SAN FRANCISCO, Apr. 29.—White comb honey, 12@12½c; amber, 9@10c; dark, 7@7½c. Extracted, white, 6½@7c; light amber, 5½@6c; amber, 5@5¼c; dark. 4@4¼c. Beeswax, good to choice, light. 27@29c; dark, 25@26c.

Last year's product has been tolerably well cleaned up, particularly the desirable stock. Present offerings are largely odds and ends, including little of fine quality. Values for the time being are little more than nominal. A lower range of prices is looked for on coming crop.

WANTED WHITE CLOVER EXTRACTED HONEY!
Send sample and best price delivered here; also Fancy Comb wanted in no-drip cases.
THE FRED W. MUTH CO.
32Atf Front and Walnut, CINCINNATI, OHIO.

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FREE FOR A MONTH....
If you are interested in Sheep in any way you cannot afford to be without the best Sheep Paper published in the United States.

Wool Markets and Sheep
has a hobby which is the sheep-breeder and his industry, first, foremost and all the time. Are you interested? Write to-day.

WOOL MARKETS AND SHEEP, CHICAGO, ILL.

The Emerson Binder

This Emerson stiff-board Binder with cloth back for the American Bee Journal we mail for but 60 cents; or we will send it with the Bee Journal for one year—both for only $1.40. It is a fine thing to preserve the copies of the Journal as fast as they are received. If you have this "Emerson" no further binding is necessary.

GEORGE W. YORK & CO.,
144 & 146 Erie Street, CHICAGO ILL.

The Best Bee-Goods in the World....

are no better than those we make, and the chances are that they are not so good. If you buy of us **you will not be disappointed. We are undersold by no one.** Send for new catalog and price-list and free copy of THE AMERICAN BEE-KEEPER; in its thirteenth year; 50 cents a year; especially for beginners.

—THE—

W. T. Falconer Mfg. Co.,
JAMESTOWN, N. Y.

W. M. GERRISH, Epping, N.H., carries a full line of our goods at catalog prices. Order of him and save the freight.

Please mention Bee Journal when writing.

A Few Cheap Smokers!

We find we have on hand a few slightly damaged Clark and Bingham Bee-Smokers, which got a little damp and soiled at the time of the fire in the building where we were about 2 years ago. They are all almost as good as new.

We have some of the Clark Cold Blast, which when new sell now at 55 cents each; and some of the Little Wonder Bingham—new at 50 cents. But to close out those we have left that are slightly damaged, we will fill orders as long as they last at these prices:

Clark at 25 cents each; Little Wonder Bingham at 30 cents each.

We do not mail any of these slightly damaged Smokers, but will put them in with other goods when ordered, or sell them here at our office when called for—at the above prices.

GEORGE W. YORK & CO.,
144 & 146 E. Erie Street. - CHICAGO, ILL.

Bee-Keepers, Remember

that the freight rates from Toledo are the lowest of any city in the U.S. We sell

Root's Supplies at their Factory Prices * * * * *

Poultry Supplies and Hardware Implements a specialty. Send for our free Illustrated Catalog. Honey and Beeswax wanted.

GRIGGS BROS.,
214 Jackson Avenue,
TOLEDO, OHIO.

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$300,000,000.00 A YEAR and you may have part of it if you work for us. Uncle Sam's poultry product pays that sum. Send 10c for samples and particulars. We furnish capital to start you in business. **Draper Publishing Co., Chicago, Ill.**

Special Notice to Bee-Keepers!

BOSTON

Money in Bees for You.
Catalog Price on

ROOT'S SUPPLIES

Catalog for the Asking.

F. H. FARMER,
182 Friend Street, Boston, Mass.
Up First Flight.

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26th Year Dadant's Foundation 26th Year

We guarantee Satisfaction. What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS. PATENT WEED-PROCESS SHEETING.

Why does it sell so well? Because it has always given better satisfaction than any other. Because **in 25 years** there have not been any complaints, but thousands of compliments.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

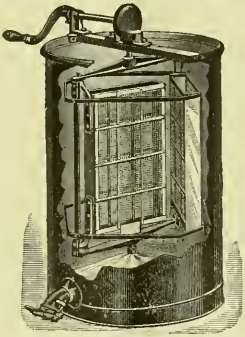
Bee-Keepers' Supplies OF ALL KINDS *****

Very fine pure-bred **BARRED PLYMOUTH ROCK** Chickens and Eggs for sale **at very low prices.**

Langstroth on the Honey-Bee—Revised,
The classic in Bee-Culture—Price, $1.20, by mail.

BEESWAX WANTED at all times.

DADANT & SON,
Hamilton, Hancock Co., Ill



They Wear the Blue Jackets

Root's Improved Gowan Ball-bearing Honey-Extractor

Since the introduction of these extractors some 14 years ago to the bee-keeping world, we have been experimenting with a view to eliminating the weak points, and perfecting the stronger ones.

ALL SIZES.—We manufacture all sizes of extractors from the small 2-frame to the 4 and 6 and 8-frame power-machines. The can part of these extractors is made of galvanized iron covered with blue japanning, and neatly lettered.

GALVANIZED.—The comb-baskets are galvanized wire, well braced; the hinges, hoops, cross-arms, and other metal parts, are galvanized after finishing, something you will get in no other on the market.

BAND-BRAKE.—All 4, 6, and 8-frame machines are provided with band-brake, which permits of the stopping of the machine instantly, without danger of breakage. These machines have large metal handles. Ball-bearings are used to make them very light running. The honey-gates are large, which does not require the stopping of work to allow the honey to run out.

For Sale by all large dealers in Bee-Supplies.

MANUFACTURED BY

The A. I. Root Co., Medina, Ohio

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Nat'l Bee-Keepers' Convention at Los Angeles, Aug. 18-20

AMERICAN BEE JOURNAL

43d Year. CHICAGO, ILL., JUNE 4, 1903. No. 23.

WEEKLY

MORLEY PETTIT, OF ONTARIO, CANADA.
(See page 356.)

THE AMERICAN BEE JOURNAL

PUBLISHED WEEKLY BY
GEORGE W. YORK & COMPANY
144 & 146 E. Erie St., Chicago, Ill.

Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

EDITOR,
GEORGE W. YORK.

DEPT. EDITORS,
DR. C. C. MILLER, E. E. HASTY, EMMA M. WILSON

IMPORTANT NOTICES.

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The Wrapper-Label Date of this paper indicates the end of the month to which your subscription is paid. For instance, "dec03" on your label shows that it is paid to the end of December, 1903.

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National Bee-Keepers' Association

Objects of the Association:

1st.—To promote the interests of its members.
2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

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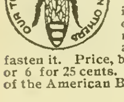
A Celluloid Queen-Button is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-lapel. It often serves to introduce the subject of honey, and frequently leads to a sale.


OUR TOIL DOTH SWEETEN OTHERS

The picture shown herewith is a reproduction of a motto queen-button that we are furnishing to bee-keepers. It has a pin on the underside to fasten it. Price, by mail, 6 cents; two for 10c; or 6 for 25 cents. Send all orders to the office of the American Bee Journal.

Dr. Miller's New Book

SENT BY RETURN MAIL.

The book contains 328 pages, is bound in handsome cloth, with gold letters and design; it is printed on best book-paper, and illustrated with over 100 beautiful original half-tone pictures, taken by Dr. Miller himself. It is unique in this regard.

The first few pages of the new book are devoted to an interesting biographical sketch of Dr. Miller, telling how he happened to get into bee-keeping. Seventeen years ago he wrote a small book, called "A Year Among the Bees," but that little work has been out of print for a number of years. While some of the matter used in the former book is found in the new one, it all reads like a good new story of successful bee-keeping by one of the masters, and shows in minutest detail just how Dr. Miller does things with bees.

HOW TO GET A COPY OF DR. MILLER'S "FORTY YEARS AMONG THE BEES."

The price of this new book is $1.00, post-paid; or, if taken with the WEEKLY **American Bee Journal** for one year, BOTH will be sent for $1.75.

Or, any present regular subscriber to the American Bee Journal whose subscription is paid in advance, can have a copy of Dr. Miller's new book *free as a premium* for sending us **Two New Subscribers** to the Bee Journal for one year with $2.00. This is a magnificent offer, and should be taken advantage of at once. For many of our readers it is not only an easy way to earn a copy of the book, but at the same time they will be helping to extend the subscription list of the old American Bee Journal, and thus aiding also in spreading the best kind of apicultural information among those who would be successful bee-keepers.

Address all orders to
GEORGE W. YORK & CO.,
144 & 146 E. Erie Street, CHICAGO, ILL.

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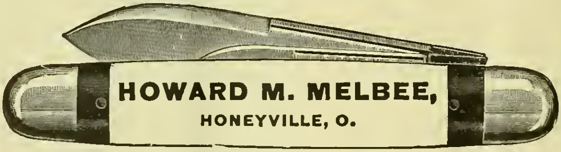
The Novelty Pocket-Knife.

Your Name and Address on one side—Three Bees on the other side.



(THIS CUT IS THE FULL SIZE OF THE KNIFE.)

Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the subscriber, and on the other side pictures of a Queen, Drone, and Worker, as shown here.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a last-time, with proper usage.

Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the "Novelty" is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the "Novelties," your POCKET-KNIFE will serve as an identifier; and in case of death, your relatives will at once be notified of the accident.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid for $1.25, or give it as a Premium to the one sending us THREE NEW SUBSCRIBERS to the Bee Journal (with $3.00.) We will club the Novelty Knife and the Bee Journal for one year, both for $1.90.

GEORGE W. YORK & CO. Chicago, Ill.

☞ Please allow about two weeks for your knife order to be filled.

ESTABLISHT IN 1861
AMERICAN BEE JOURNAL
THE OLDEST BEE-PAPER IN AMERICA

43d YEAR. CHICAGO, ILL., JUNE 4, 1903. No. 23.

Editorial Comments

A Very Early Season is that of 1903 in northern Illinois, perhaps the earliest in the memory of any living bee-keeper. Swarming is reported as early as May 3, and white clover in bloom about 10 days later.

A Lack of Rain the first two-thirds of May was beginning to make bee-keepers somewhat anxious in this region. The ground is well covered with white clover, but it was so dry that the clover leaves were curling up in the sun. Abundance of rain since then.

A Wonderful Honey-District is what the Upper Glenelg district is well styled in the Australasian Bee-Keeper. A Mr. Bolton, an English engineer, was the pioneer in that region. His "spring count" in 1898 was 100 colonies, and in the following four years it was 223, 310, 329, and 384. During those five years the gross value of the honey and wax produced by him averaged for each year $3280.

Dividing an Apiary Between Two Localities.—Under proper conditions there is great gain in establishing out-apiaries, but the enthusiast in that direction may magnify the advantages. The following from the Bee-Keepers' Review seems to be a case in point:

> An illustration of how out-apiaries may help to make bee-keeping more profitable was given me recently while visiting at Mr. Bingham's in Clare County. He is located upon high, sandy soil, and the honey crop there last year was light—about 20 pounds per colony. Clare, only four miles away, is lower, and the soil is clay, and bee-keepers in that locality enjoyed an excellent harvest. This year it may be Mr. Bingham's locality will have a good crop. An apiary divided between the two localities would almost double the opportunities for success.

If each locality is the better in alternate years, then there would be a gain in migrating from one locality to the other; but it is hard to see how "an apiary divided between the two localities" would be a matter of gain, for while each half of the apiary would have the advantage of the good year when it came, it would also have the disadvantage of the bad year, the two balancing each other.

Non-Hatching Eggs.—Dr. C. C. Miller writes concerning this:

> "I have a queen whose eggs do not hatch—the second one of the kind I have had during my bee-keeping career. The cells are well supplied with eggs, and I suspect that when an egg becomes stale the workers remove it to give room for a fresh one: for only one egg appears in a cell, and this continues week after week with never a grub to be seen. Don't you think you could find me a purchaser for this queen at a hundred dollars or so? New strain of bees, you know."

Some very evident advantages would be gained by having such a strain of bees. They would be proof against foul brood, for there would be no brood to be diseased. There would be a great saving of stores, since no brood would be fed. They would be non-swarming, and other advantages will be suggested. But with all these advantages there would be one little drawback: With no eggs hatching there would be some difficulty in rearing queens, and some danger that in the course of time the strain would run out!

Old vs. New Hives.—In a discussion reported in the British Bee Journal, Mr. Weston said that he thought it would be advantageous to give up using very old hives, which might become saturated with the unhealthy products of the bees. The keeping of these old wooden hives for the usual long period was against bee-keepers. The straw skeps were never retained like that. It was a point to be thought of as to whether a single-walled hive would not be more hygienic than the present double-walled one which harbored impurities that could not be got at and eradicated.

Mr. Carr said that without possessing any scientific knowledge, they knew that some of our oldest and best bee-keepers, who knew the importance of keeping their hives clean, were now using the same hives that they had 20 years ago, and saw no reason for destroying them at intervals.

In this country age has not been considered an objection to hives. Certainly it can not be claimed as an advantage, and the possibility of a difference between old and new hives, so far as it may have any weight, will be an additional item to strengthen the position of those who advocate using hives without paint.

Tarred Paper for Wintering.—Mr. A. C. Miller advises tying it about hives, and it has proved successful with him. Editor Root says:

> I once had the idea that paper tied around a common hive would winter bees as well as a chaff-packed hive. We fixed up a number of hives in that manner, setting a close-fitting winter-case over the whole; but in nearly every one of the hives so prepared the bees died, while those in the chaff-packed hives came through in the usual good order.

To which Mr. Miller may reply that the two cases are not parallel, since in his case there was no winter-case outside the paper.

When to Put On Sections is one of the stock questions of beginners each year about this time. It is not well to put on sections too early, for it takes some of the heat of the colony to keep warm the empty space. The bees also may do some damage to the sections by crawling over them, and sometimes by gnawing the foundation; although damage of this kind is greater at the close than before the beginning of the honey-flow. But it is much better to put on sections a little too early than a little too late. Abundance of super-room is a factor that plays an important part in the prevention of swarming. Being crowded just one day too long may be the last straw to decide the bees to swarm.

If one could know just when the main flow is to begin, it would probably be well to put on sections two or three days in advance. An old rule is to put on supers when bits of white wax are found plastered on the upper parts of the combs and along the top-bars. The rule is not a bad one, for by close watching one can tell pretty certainly when this white wax appears, yet it is possible that this deposit of new wax is a result of being crowded, and so comes after the crowding; so it would be well to anticipate it a little.

Instead of watching the bees, watch the flowers. Where white clover, for instance, is the crop to be provided for, if you are *closely* on the watch you will see the first clover in bloom—just a single blossom or two—several days in advance of the general blooming. About ten days after you see that very first blossom it will be time to put on sections. Just how soon the bees will commence storing in them depends upon circumstances, but in any case it is well to have them on in time. Possibly no nectar will be secreted, and no sections needed, but you can hardly know that in advance, and if necessary you can take the supers off again. If there are empty cells in the brood-chamber you need not expect any storing in sections till after the brood-combs are filled.

Sketches of Beedomites

MORLEY PETTIT.

Mr. Morley Pettit, the youngest son of Mr. S. T. Pettit—one of Ontario's most successful veterans in bee-culture—was born amid apicultural surroundings, and reared, as it were, in the apiary. His earliest recollections do not include the time when he first "watched the bees" in the swarming season, nor when he got his first sting (only that neither was considered agreeable). But a day came when he was considered big enough to "blow smoke" while his father "operated on some hives," and when he could "get stung without crying."

The smoker of earliest memory was one made by A. I. Root, with short, upright barrel, and a tube in the center reaching nearly to the end of the nozzle. The bellows originally had a valve, but at that time the valve was not working, and the smoke was drawn into the bellows and blown out again through this tube. In the side of the barrel was a hole for lighting and giving air to the fire. Coals used occasionally to drop from this hole on the hands of the inattentive bellows-boy, and that, coupled with an occasional sting, and a constant desire to be at any but a useful occupation, did not fire him with enthusiasm to become a leader in apiculture.

After attending public school, and passing the High School Entrance Examination, Morley entered the St. Thomas Collegiate Institute, passed in succession all the annual examinations set for High School pupils by the Ontario Educational Department, and matriculated to Toronto University with First Class honors in mathematics. He next spent a couple of years teaching, then entered upon his University course, completing his second year with honors in Philosophy, in May, 1899.

During these years he had spent his summer vacations, with one exception, assisting in the apiary, forming a liking for the business and learning its possibilities. He also learned to contrast the confinement of professional life with the freedom and probably equal financial remuneration of bee-keeping. Accordingly, when in the fall of 1899, his father, being then 70 years of age, wished to retire from business, he assumed control of the apiary. Since then he has met with financial success which has quite warranted him in his choice. The one apiary has been increased only to two as yet, but there is prospect of more to follow.

While he has been almost as successful in producing fancy comb honey by the S. T. Pettit system as his father, present prices make it seem advisable to run almost exclusively for extracted honey. For this purpose a brood-chamber equivalent to the 10-frame Langstroth is used, and, at the beginning of the honey-flow, sufficient super-room is given to contain 80 to 100 pounds of honey. The brood-chamber may also be enlarged at that time, and this, in an ordinary season, reduces swarming to a minimum.

At the close of the white honey-flow screens are slipped into porticoes permanently attached to the hives, they are loaded, 40 at a time, on a specially constructed spring-wagon, and moved about 25 miles for buckwheat. They are afterward moved home and wintered, some in clamps, and some in a well-ventilated cellar. This year's loss was between 3 and 4 percent of the number of colonies, and prospects are bright for a good honey-flow.

It was our good fortune to meet Mr. Pettit at the last meeting of the Chicago-Northwestern convention. He is an excellent convention bee-keeper, ready at all times to contribute his part in discussions. Speaking of conventions, he finds them of great value, and attends every one he can reach, for the inspiration of them as much as for the many useful points which can be gleaned. As he heard Mr. Coggshall say once, "It spurs you on." He says about the Chicago convention, that which stands out most clearly in his mind, after the pleasure of meeting all the bee-keepers, is Mr. N. E. France's matchless description of the symptoms and treatment of foul brood.

Mr. Pettit is a contributor of no mean ability to the apicultural press. He is on the regular contributors' staff of the Farmers' Advocate, of Ontario, now the third year out of the four since he left the University; he contributes at intervals to the Montreal Herald, and regularly reports every convention which he attends. He finds the reporting very helpful, as it allows no superficial attention to discussions, and by the time the good points are put in shape for publication, they are well fixed in mind.

It affords us pleasure to present to our readers, both in picture and in word, our young bee-keeping friend from across the northern border. We wish him all success in his chosen vocation, as well as long life and much happiness all along the way.

Association Notes

Stealing from a National Member.—General Manager France reports having caught three persons guilty of stealing from an apiary of one of the members of the National, on Saturday, May 16. They were given until 6 p.m., May 25, to make satisfactory settlement, or take results of the enforcement of the law. Two of the three, before the day was gone, came and settled, and it was thought the third would do so very soon.

Over 1200 Members of the National Bee-Keepers' Association are now reported by General Manager France. And still they are joining. There ought to be 2000 members within the next three months. Why not? You can send your dues of $1.00 either to N. E. France, Platteville, Wis., or to the office of the American Bee Journal, as we are the Secretary of the Association, and it is one of our duties to receive membership dues from all who may send. We then forward them to the General Manager and Treasurer, Mr. France, who sends the receipts. We should like to have several thousand bee-keepers among the readers of the American Bee Journal send us their dues within the next 60 days.

The National in Los Angeles.—Prof. Cook, of Los Angeles County, Calif., on May 16, wrote us as follows regarding the holding of the National Bee-Keepers' Convention in Los Angeles this year:

> The bee-keepers of Southern California are greatly rejoiced that the National convention is to come to our Southern metropolis. Los Angeles is not only one of the most beautiful and prosperous cities of the country, but its hospitality is second to that of no other city of the Union. We have had a year of exceptional rain, and unless the weather is too cold (this has been one of the coldest seasons known up to date) we shall have an immense crop of honey. Thus, it is to be expected that our apiarists will be exceedingly good-natured the coming summer, and will do their best to entertain our visitors. It will certainly be a surprise to Eastern bee-keepers to find apiaries numbering hundreds of colonies, and each colony of bees securing hundreds of pounds of honey in one season.
>
> I have been asked to present a paper to the convention. I will take the subject which seems to me by all odds the most important now before our bee-keepers, that of co-operation in marketing. This ball was set rolling at the last annual meeting. It is a matter which can not too generally engage the attention of our bee-keepers. We can never secure a just price for our honey until we have control of distribution in the markets. The fact that bee-keepers are so scattered will make it a long and tedious matter to secure general co-operation, but it must come, and it will be a good day for all labor when it arrives.
>
> All kinds of business are united except manual-labor pursuits. It is a bright omen that there is so much thought and effort at present in the line of union in these last-named occupations. Until people become entirely unselfish—and that we fear is not very near—there can not be justice between man and man till all classes are equally organized and equally successful in securing fullest co-operation. The success, then, of labor unions and of co-operation among all producers is to be encouraged at all times and places. There may be some trouble, some wrong, some injustice, yet the trend is and should be in the way of more perfect—aye, most perfect—co-operation.
>
> A. J. Cook.

We have no doubt that California's big-hearted bee-keepers will give the National the grandest—well, if they go ahead of Denver, or Buffalo, or Philadelphia, or—oh, Chicago—in their entertainment of the National, they'll have to get a Golden Gate hustle on themselves. But we have heard that California is a great State, that it has great bee-keepers—and lots of them; and we have been privately informed that they are going to give the National this year such a welcome, and such a grand, good time, that it won't be so long before it holds a meeting there again.

Convention Proceedings

The Northern Michigan Convention.

BY JAMES H. IRISH.

The Northern Michigan Bee-Keepers' Union met in its fourth annual convention at Bellaire, March 25 and 26, 1903.

The President being absent, the meeting was called to order by Vice-Pres. Elias E. Coveyou. James A. Dart, the Secretary, was present, but owing to business could remain only until the next train north. He was excused from acting, and James H. Irish was called to the secretary's desk. The meeting was enthusiastic from the beginning to its close.

Among those present from a distance were Mr. and Mrs. A. I. Root, W. Z. Hutchinson, Geo. E. Hilton, and A. G. Woodman. The country lying between Traverse City and Petoskey was well represented by a large number of bee-keepers, who are practical apiarists and honey-producers on a large scale, many of whom gave very flattering reports of honey produced last season. Geo. H. Kirkpatrick made the statement that he had attended a great many bee-keepers' conventions in Ohio, Indiana, Illinois, and in this State, and that he never knew a given number of bee-keepers to report so large a number of colonies and so great a yield of honey per colony as the bee-keepers gave at the Bellaire convention.

WINTERING BEES.

The discussion opened on wintering bees, and was discussed from various standpoints, as wintering on summer stands in chaff hives, and various methods of cellar-wintering, some holding that plenty of ventilation was needed, while others thought that practically no ventilation was needed. All wintered with good results; very few losses from any cause were reported.

Mr. S. D. Chapman wintered 236 colonies in the cellar without loss. He began last season with 150 colonies and took 15,000 to 16,000 pounds of well-ripened honey, mostly extracted, during the honey season.

Ira D. Bartlett took 13,000 pounds from 88 colonies, 1500 of which was comb honey.

A. I. Root gave an experience in Cuban bee-keeping, reporting one Cuban bee-keeper as saying he could produce extracted honey at 2 cents per pound and comb honey at 9 cents. The quality of Cuban honey varies greatly, but compares favorably with honey produced in the United States.

At this point of time a number of bee-keepers arrived on the train from the south, and a short recess was taken. When the convention was called to order Geo. E. Hilton was called to the chair, and the rest of the day was devoted to discussing various questions, such as,

How and when shall we requeen apiaries?

Has any one tried to increase the amount of wax produced?

How do you get the wax from old combs and cappings?

How to mold wax without having it crack?

How many colonies pay best in one locality?

After a recess for supper, A.I. Root was asked to address the convention on Cuba. He described the manners and customs of the people to the great pleasure of the audience.

The question-box was again opened, and these questions discussd:

When does the keeping of bees become a public nuisance?

What about the National Bee-Keepers' Association?

The morning session of March 26 was called to order at 9 o'clock by Pres. Hilton. A. I. Root was given the floor, and discussed "Bee-Keeping in Cuba," after which W. Z. Hutchinson read a paper written by T. F. Bingham, on "Wintering Bees."

The question, "Where shall we hold our next meeting?" was discussed, and Traverse City was selected, the time to be set by the officers.

This was followed by the election of officers for the ensuing year, which resulted as follows:

President, Geo. H. Kirkpatrck; vice-president, S. D. Chapman; secretary and treasurer, James H. Irish, of Rapid City.

On motion, the name of the Northern Michigan Bee-Keepers' Union was changed to the Northern Michigan Bee-Keepers' Association. JAMES H. IRISH, *Sec.*

A District Bee-Keepers' Convention.

BY R. F. HOLTERMANN.

A convention of bee-keepers embracing Brant and adjoining counties was held at the Court House at Brantford, beginning the evening of March 3, at 7 p.m. James Armstrong was elected chairman. A question drawer was opened, the following being some of the questions and answers:

PLANTING FOR BEE-PASTURE.

"Does it pay to plant for bee-pasture?" Yes, if the sowing can be made to pay for a crop otherwise.

Speaking of alsike clover for seed, the chairman gave an illustration of the value of the honey-bees as fertilizers of blossoms. A man across the road from his bees had five bushels of alsike clover seed to the acre, when those out of the range of his bees had not enough seed set in the clover to make it worth threshing. Mr. Barber stated that he had $35 worth of alsike clover seed to the acre during the past season. One person said they raised within a circle of two miles of him $4000 worth of alsike clover seed. It was pointed out that in some districts of Ontario the farmers had been producing alsike clover seed for at least 30 years, and as evidence of its value farmers could not be induced to stop raising a crop of it. Similar recommendations were made for sowing buckwheat.

SOME RELIQUEFIED HONEY FROTHIER THAN OTHERS.

"Why in reliquefying honey is some more frothy than others?"

Jas. Armstrong—It may be slightly soured.

Jas. Shaver—It is partly the source from which the honey is taken.

Alex. Taylor—I extract and leave it in cans holding about 400 pounds, then run into 60-pound cans. The honey varies in these cans as to amount of froth on top, although drawn from the same tap.

R. F. Holtermann—The causes vary; one is a degree of ripeness, another the source from which gathered. I believe, as a rule, basswood honey has more froth on it. Third, the degree of heat applied to the honey makes it vary as to froth.

UNSCREWING CAPS ON HONEY-CANS.

"Is there any simple way to unscrew the cap of a honey-can?

Mr. Shaver—If too tight to move by hand, wind a cord three times around the screw cap and pull steadily.

TEMPERATURE OF BEE-CELLARS.

"What temperature should a cellar be? What moisture should be used? And do the top colonies winter better than those at the bottom?"

Mr. Armstrong—I was in one a week ago, and the temperature was 43 degrees; when the bees were picked from the floor they appeared to be very dry. The first hive was raised 8 inches from the floor.

Mr. Shaver—I have a cellar pretty moist; in fact, I thought it was too much so. This winter it is being tested in a small way, and appears to be all right.

It was thought that temperature was very important, but that moisture or degree of humidity was also an important factor, about which at present but little is known among bee-keepers.

As to the height from the floor of cellar it was thought that where there was a proper system of ventilation the atmosphere never was sufficiently stagnant to allow impure air to settle to the bottom of the bee-cellar. Some had noticed a distinct difference between the bees in the upper and lower rows of hives in a cellar without a proper system of ventilation. One member, who had experience with both systematic and "any way or no way" of ventilating, experienced as above given. No one reported placing bees on a stand greater than 20 inches in height, or less than 6 inches.

"SHOOK" SWARMS—SIZE OF HIVES.

"Is the 'shook' swarm system a success?"

The general opinion was that it would be in a measure, but unless carefully carried out much harm might result.

"Are large hives desirable?"

Mr. Fisher—I have a hive with 17 Langstroth combs for the brood-chamber, and I can place two 8-frame Langstroth supers on top. By turning it half around I can make a packing-case of it for an 8-frame Langstroth body.

He had filled by queens 16 Langstroth combs, the outside combs partially filled. He had received during the past season 30 Langstroth combs of buckwheat honey, and about 20 of clover, besides an increase of 2 colonies.

Mr. Holtermann—The 12-frame Langstroth suits me. Of course, I do not care if a man uses a 2-frame or a 20-frame hive, but I think Mr. Fisher is going too far in the direction of large hives.

Mr. Fisher—I calculate to give room in the brood-chamber only as required.

FEEDING BEES—EXTRACTING HONEY.

"If bees have lots of honey, should one feed?"

Mr. Shaver—Bruise some of the combs; that will answer.

"When should honey be extracted?"

Some thought when two-thirds capped; others when all capped. It was pointed out that dry or wet seasons made a difference, the dryer the season the sooner the honey could be extracted. If the honey glistened in the cells it was thought fit to extract. It was also pointed out that if the bees swarmed, the fresh previously stored honey might remain in the hive for quite a time and yet not be ripe.

ROBBING AND HOW TO PREVENT.

"How shall we prevent robbing, and how stop robbing when a colony is being robbed?"

Mr. Phelps—Close the hive; contract the entrance of weak colonies.

A Bee-Keeper—Be careful to allow no honey about during the robbing season.

Chairman Armstrong—Have all colonies strong.

Mr. Holtermann—Let me say if any one should be careless enough to allow a comb of honey to be exposed until the bees have robbing from it well in hand, to reduce the danger of robbing it is well to allow the comb to remain until they empty the comb, otherwise the bees will realize there was still some honey left, and, in hunting about, it may lead to the attack of weak colonies.

He had a portico with a movable screen, when present, and for any reason the colony was attacked, he simply stepped up to the hive and closed it from outside bees without any danger of smothering. If bees had obtained entrance they would speedily seek to get out, running up on the screen; there they could be let out until only bees from the hive remained, thus the colony could set a guard and pull themselves together for defense.

EXTRACED HONEY AND EXTRACTING.

The care of extracted honey was taken up, the chairman pointing out that much good honey was injured by improper care upon taking. Storage in a warm, dry room was advised.

The question: "How can we best extract in the robbing season?" led to the suggestion that combs should be set out for the bees to clean. The danger of spreading foul brood was pointed out. Prof. Harrison's opinion being asked, he stated that he could not see how any one could be sure that the honey left in the combs did not contain the germs of foul brood, even if there was no diseased brood in the brood-chamber below such combs. He would defy any ordinary bee-keeper to be safe, and would advise extreme caution in setting out such combs; it would be safer not to do so. It would be desirable to disinfect extracting combs from season to season with formalin. The combs of from 200 to 300 colonies could be disinfected at an annual outlay of about 20 cents. The use of medicine was more in the direction of prevention of disease than a cure.

FOUL BROOD—HOW TO EXTERMINATE IT.

Prof. Harrison gave an address upon the subject of foul brood. He stated the dread of it in certain sections was preventing the expansion of the industry. From 1893 to 1898 the Inspector of Apiaries found 40 percent of the apiaries inspected infected. To what extent these apiaries had been cured was not known, owing to the lack of system in following up the treatment.

Any one reading the bee-literature of Europe and America found a great difference in the method of treatment. When in Swtzerland, Germany and Italy he had tried to find out why this difference existed. Monsieur Bertrand, of Switzerland, had offered as a suggestion, that owing to exposure in Europe the bees had become immune to the disease; this, however, seemed to him (Harrison) doubtful, as the bees of this country were largely imported from there.

In Europe the methods adopted were these.

1. The stamping out method, destroying the colonies, combs, hives, etc. Mr. Cowan and the British Bee-Keepers' Association were inclined to adopt this method.

2. The starvation method introduced by Schirach, in 1769. It was to take away the combs from the bees, keep the bees fasting two days, after which they were fed and allowed to build other comb, which was again taken away in two days.

3. The drug cures are practiced in Europe, but not in America. The bees were fed a disinfectant, which acts on the spores and bacilli of foul brood. The antiseptic material employed destroyed the germ.

The best remedy had been napthol beta, in England, and formic acid on the Continent. Both are disinfectants, formic acid being the better of the two, being Nature's remedy. This formic acid is found in honey in varying proportions, more being in buckwheat honey than in clover.

Prof. Harrison then gave the method of applying the fumes of formic acid, 10 percent formalin, 40 percent alcohol, 50 percent water, the mixture heated in a vessel, and by means of a tube the vapor passed into an air-tight box containing the combs. The fumes were to be left in the box 12 to 24 hours. Formalin is used to disinfect rooms, the fumes being very penetrating. Germs of diphtheria wrapped in paper, several thicknesses, this package being wrapped in a blanket, and all suspended in a room treated with formalin fumes, showed that the fumes had penetrated the wrappings and destroyed the germs.

Prof. Harrison was asked to read a letter from Gleanings of Feb. 15, by C. H. W. Weber, giving the result of the successful treatment of foul-broody combs. He advised extensive tests to be made with this method, and results obtained.

Wm. McEvoy, Inspector of Apiaries, gave a statement in which he said the disease was almost stamped out in Ontario, and that much good work had been done. There was a little in one or two counties, and this would be dealt with in the spring.

Mr. Holtermann stated that he had very strong evidence that there was still a great deal of foul brood in the Province. In a county adjoining Brant, it was so bad that the bee-keepers had given up; some would buy neither hives nor fixtures until they knew where they were. The inspector had been there during 1901, but had left their district unattended during 1902. Bee-keepers in Brant County did not know how they stood, and as far as inspection went there might be a good deal in the county. He read a letter from the President of the Ontario Bee-Keepers' Association for 1902, claiming it was not on the decrease; also one from J. C. Marrison, of Simcoe County, where they wanted county inspectors. The work could then be done at a more seasonable time, and for less money; he had nothing to say against Mr. McEvoy, it was simply the need of other methods.

After some discussion it was moved by R. F. Holtermann, seconded by D. Phelps, that we, as bee-keepers assembled, request the Hon. John Dryden, that the operations of the Foul Brood Act be so arranged that Prof. Harrison, of the Ontario Agricultural College, of Guelph, would be recognized as a Government official, who could investigate and test the results of treatment of foul-broody apiaries. Carried.

It was also moved by Mr. Holtermann, and seconded by Israel Overholt, that we as bee-keepers assembled, ask the Hon. John Dryden that the Foul Brood Act be amended so that wherever there is a county or district bee-keepers' association, that said association have the privilege of appointing a local inspector of apiaries, subject to the approval of the Minister of Agriculture, the terms of remuneration to be fixed by the Minister, said inspector to be paid out of the Provincial grant for the Inspector of Apiaries. Carried.

The question was asked, if it was thought desirable that Mr. G. C. Creelman, Superintendent of Farmers' Institutes and Secretary of Associations, should be made secretary of the Association.

After a brief discussion, in which the majority expressed themselves as thoroughly in favor of such a move, it was moved by J. Feather, seconded by D. Phelps, that we as bee-keepers, avail ourselves of the privilege of recommending Mr. G. C. Creelman, B. S. A., Secretary of Associations, Department of Agriculture, Toronto, as Secretary of the Ontario Bee-Keepers' Association, and that said resolution be forwarded to the director of this district, to present to the Ontario Bee-Keepers' Association at their next annual meeting. Carried.

The Deputy Minister of Agriculture, Prof. C. C. James, attended the afternoon session of the meeting, and being called upon for an address, stated that he came to listen rather than to talk. In his address he said it was rather in the form of a confidential talk, and not for publication. He advised the bee-keepers to get more in touch with the Department, and make more advancement than they had been doing. The Government did not know much about them; they must make their work better known.

Contributed Articles

Rearing Queens in Upper Stories.

BY L. STACHELHAUSEN.

On page 248, Mr. Hasty says:—"So far as words and names go, Stachelhausen's method of *starting* queens in upper story is a sort of swindle." Mr. Hasty has surely not read my article on page 150 very carefully. Not anywhere did I claim that I *start* the queen-cells in upper stories. The described plan comes very near to it, but twice in my article I called this removed upper story a *queenless colony*. I said expressly that I used Alley's brood-strips, and that they *must* be given to queenless colonies for some hours to get queen-cells started, while Doolittle's cell-cups *can* be given in the upper story at once. I do not like to be estimated as any kind or sort of a swindler, and hope Mr. Hasty will correct this injustice and his bad opinion.

This preparing of a queenless colony of the right condition to start queen-cells causes considerable work, if Alley's directions are followed; so, for many years, I experimented to find a way for forming such colonies with less expenditure of time and labor. So, if anything is new or particular in my manipulation you may say: Stachelhausen's method of preparing a queenless colony for *starting* queen-cells.

This spring I use still an easier way with success: I prepare a bottom-board with an entrance closed by wire-cloth and place this anywhere in the shade near the hive, on which the upper story over the excluder was arranged a week before. About four o'clock in the afternoon I simply set the upper story on this bottom-board and close it with a cover, so that no bee can escape. This is all the work necessary to get the queenless colony. Soon the bees will get uneasy on account of queenlessness, and a large part of them would leave the hive if it were not closed by the wire-cloth. Two or three hours later I give the frame with the prepared brood-strips between two brood-frames. (This empty space should be prepared before the story is removed from the main colony.) During the night the bees have started queen-cells and early in the morning of the next day this story is set over the excluder on its old place again.

On pages 136 and 230, I read articles of Arthur C. Miller, in which the author lays the most weight on the fact that *young* bees are necessary to rear good queens. In my article (page 150) I said: "A large surplus of young bees compared with the *open* brood is the most important thing for rearing queens," and tried to explain *why* it is so. It is interesting that such men as A. C. Miller, Henry Alley and E. L. Pratt arrived at the same conclusion by practical tests, as we did by theory. To some extent it is a proof that our theory is correct.

In an upper story we can create this surplus of young bees, if we wait 8 or 10 days before we give the queen-cells to be cared for, as, during this time, many young bees will have hatched and the young brood is all capped. The only question may arise, whether these young bees will stay in the upper story, or will go down into the brood-chamber, where they may find plenty of young brood to be fed. In fact, this may happen if in a large brood chamber is a comparatively weak colony. This, of course, should be avoided; only strong colonies, which occupy fully not only the brood-chamber, but the upper story, too, (even if no brood is in the latter) are fit for this purpose. Then we have to consider another fact, which is entirely overlooked by most bee-keepers. In the bee-hive a most remarkable order is prevalent. The queen lays eggs in the cells in a certain order, going around on the comb in circles, and when a certain number of eggs is layed, she goes to the next comb, etc., so that the oldest brood is in the middle in the form of a globe, and the next oldest surrounding it, like the shells of an onion, etc.

If the young bee has hatched, she is not strolling around in the hive hunting for larvæ to be fed, but remains just in the space between two combs, where she was born. Her duty, the first days, is to clean her own cradle. In due time the queen in her circling way arrives on this spot. In the meantime the young bees have accumulated chyle in their stomachs, and so where the queen finds empty cells she will find young bees, too, which are eager to feed their chyle to her, of which she needs and consumes so large a quantity.

With the young larvæ the nurse-bees grow older, and the food they prepare is exactly of the kind corresponding with the age of the larvæ and the age of the nurse-bees. When the larvæ are capped the nurses have to keep them warm only, and are soon ready to do other work.

If such order would not rule the colony, but the bees would loaf in the hive, it would not only cause a continued uproar, but it would be hardly possible that every larva received just the proper food vital for its age. It is true, the bee-keeper sometimes mixes this wonderful order up considerably, and thinks he has done a great thing. The bees accommodate themselves to the altered condition as well as possible, but sometimes weeks may pass before everything is in order again, and sometimes a real damage is done to the colony.

In the upper stories, too, the young bees do not leave the combs as long as some brood is in them, except when they are forced to do so by the bee-keeper. Everybody can see this, if he gives Italian brood in the upper story of a black colony, and examines it 8 or 10 days later; if the honey-flow is not *very* good, he will find very few black bees on the 3 or 4 brood-combs; while the other combs containing some honey are occupied by black bees only. An upper story, if the colony is strong enough and the whole arranged correctly during a moderate honey and pollen flow, is in the same condition as a colony with the swarming-impulse, and will rear just as good queens.

Bexar Co., Tex.

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Queen-Clipping—Reasons For and Against.

BY J. D. GEHRING.

"Reuben Bond," who took some practical lessons in bee-keeping in my apiary, as related in a series of articles published in the American Bee Journal about two years ago, came to see me one day, in the midst of the busy season, "to find out," he said, "how to clip queens, and why they should be clipped."

Replying, I reminded him that there were several things in the bee-keeping line of much greater importance to him just then than queen-clipping. "Besides," I said, "it is a long story in all its details; hence, I will at present merely tell why queens are clipped. And even that is not easy to explain briefly, because, while one bee-keeper has one set of good reasons for doing it, another has a quite different set for it, and yet another has an equally good set—in his opinion, of course—for not clipping his queens.

The one says he clips his queens because it is easier to control swarming when the queens are clipped. "That alone is enough reason for me," he says. The others say, "I believe in queen-clipping because it is easier to keep track of them afterwards, and because I believe they lay better and are less liable to sneak into the sections to lay, and because I don't have to climb trees and do many like undignified things, when my queens are clipped."

Ask the third—an equally well-informed bee-keeper—why he doesn't clip his queens, and he will probably answer about as follows:

"I don't clip my queens because I don't believe in depriving an intelligent, industrious and useful creature like a queen-bee of the divinely bestowed blessing of liberty. And I don't and won't do it, because I think it's a wicked thing to do to maim and mar for life a beautiful little creature like a queen-bee. Besides, I wouldn't clip my queens for practical reasons that I can mention." He continues:

"I am a very busy man and can't afford to stand around in my apiary on the watch during the swarming season for clipped queens when they come out with a swarm. If my queens were clipped, and a swarm issues when I'm attending to business somewhere else, she'll probably get lost in the grass, or get picked up by a bee-bird. I don't keep my hives down near the ground," he explains, "so that a queen once out couldn't get back without help if she is clipped. Besides these and several other reasons, I oppose the practice of queen-clipping because I believe bee-keeping is being run away from the path of Nature marked out for bees by the Creator himself. In other words, I believe it's a violation of the law of Nature, and of bee-nature in particular, to deny them the right and the inborn inclination to swarm in their own way. Now," he concludes, "I don't want anybody to think I'm saying this because I am proprietor of the best, the tip-topest swarm-catcher in the world, but simply because I'm a friend of Nature, and of bee-nature in particular."

"Now, let me tell you, Mr. Bond," I continued, "there is more truth than poetry in at least one of the reasons given by the objector for not clipping his queens. I think myself, that, when bee-keeping—or the keeping of bees, rather—is only one of the many irons he keeps in the fire, for business reasons queen-clipping would hardly be the right thing for him. Especially not if he objects to spending reasonable wages for a reliable person to take his place at watching for clipped queens during the swarming season.

"But the matter really has its serious aspects. In your case, for instance, you have told me that you are a farmer for business, and a keeper of bees for what pleasure there may be in it, with all the honey you and family want to use. Very well, then I would advise you not to clip your queens as long as you limit yourself to two or three colonies. For it's just about as the objector says about clipped queens getting lost or devoured by birds when some one isn't promptly on hand to pick her up when she comes out with a swarm. In a case of that kind I think it would be best to let your bees swarm in their own way, and run the risk of losing your swarm, and take the labor and the sweat, and sometimes the stings, incident to the catching of it.

"This piece of advice is all the more sensible and practical in face of the fact that it is known to be extremely unusual for a swarm to issue and cut a bee-line for parts unknown (to the bee-keeper) without first clustering and waiting a while somewhere within your reach."

Douglas Co., Kans.

Feeding Bees in the Spring.

BY A. C. F. BARTZ.

ON page 278 appears a criticism by Mr. Arthur C. Miller, of Mr. Dadant's article on page 231. In it he charges Mr. Dadant with ignorance of ordinary bee-life, but makes a much greater error when he says, in part, "All sorts of food, fed in all sorts of ways, and to all conditions of colonies." Now, this is a very sweeping statement which, if taken as it reads, leaves no room for any questions whatever, and, I suppose, is taken for granted by a good many who have had no further experience in feeding for stimulating purposes than Mr. Miller seems to have, for if he had gone through the experience I went through about seven years ago, and Mr. Dadant undoubtedly had a similar experience, Mr. Miller would not have made such a sweeping statement as he did. There are conditions here in which stimulative feeding is of great value and indispensable, and his own Italics—"they are stirred up and create more heat"—are in question, because not only the welfare, but in some cases the existence of the colony depends upon them.

Now, for the benefit of the readers of the American Bee Journal, I will mention the conditions under which stimulative feeding is absolutely necessary, and I am pretty sure' if Mr. Miller ever meets with those conditions, he will approve of my statement. The conditions are as follows:

The bees, having been out of the cellar in the spring for a month or more, have had some fine weather, and brood-rearing has been progressing. Four or more combs are being filled with brood. Young bees are hatching by the hundreds every minute. Thus, the unsealed honey is being consumed very rapidly within the brood-nest.

Now, at once, comes a cold spell—a spell like we are just having—which may last two weeks. During this time the bees are forced to contract into a solid winter cluster, to say nothing of their being able to leave the hive, for that would be altogether out of the question, for a bee, leaving the hive at such spells, would never return.

The hatching bees within the cluster, on not finding enough honey to satisfy them, are just the first ones to feed upon the jelly fed to the larvæ, and, after that is gone, drop off from the comb; not yet upon the bottom-board, but within the cluster, and the bee-keeper does not know what is going on until the cluster breaks and the adult bees move slowly to combs containing honey.

The queen stops laying, and either part of the whole brood-nest is left unprotected. But if at such times a little food is given, the queen will keep on laying, the larvæ are fed, the hatching bees will remain alive, and the colony suffers but little. The bee-keeper, upon the arrival of warm weather, is delighted on seeing so many young bees taking their first flight, and, on opening the hive, finds the brood-nest still full of brood, where, on the other hand, if he had not fed, would likely find the brood-nest empty, even if the bees had reached enough honey to sustain their own life.

I am not an advocate of early spring feeding, nor at any time when bees can fly. I never found it practical, nor did I see any gain in it. *But I always* feed in such cold spells after the bees have large quantities of brood, and have found it the best investment.

I also discovered a very practical way of feeding during such cold spells. Take some extracted honey, which is candied solid; stir it and punch it until it becomes soft like dough. Then take manill a wrapping-paper or fibre, cut it into pieces about eight or ten inches square, take the honey-knife and on it paste or smear about half a pound of this extracted honey. Raise up the hive in front and push the paper under the cluster, or if the cluster does not reach the bottom-board, paste it right under the cluster on the frames. In this way you do not have to open the hive and let any heat escape, for it is done almost instantly, and the bees will take the feed up without breaking cluster.

Chippwa Co., Wis.

Bees and Cross-Pollination in Flowers.

BY H. D. SCHWEINHAGEN.

LITTLE was known about fertilization of plants before Darwin wrote his work on the fertilization of orchids, and his work on the origin of species. He wrote much on cross-pollination in flowers and gave us a universal knowledge on all living things, plants and animals. On his great work all scientific men and other observers base their investigations.

The unparalleled success of Charles Darwin is well known. It shows him at the close of his century, to have been, if not the greatest, at least the most effective of its distinguished scientists. The question of cross-pollination, I think, is well settled through his work and the observers of to-day. Under this class I feel that all successful bee-keepers must be classed.

But the question whether bees are beneficial to orchards is somewhat problematical. Bee-men, who usually are quite accurate observers, are positive about it, and are, of course, in favor of the bees' usefulness to horticulture. Fruit-growers on the other hand, often claim to find crops just as good, or even better, without the aid of the bees.

But if we observe how the plant is dependent upon the insects, the question becomes a very interesting one. Many of us, however, have never seen the actual process. Insects move so rapidly, and many of them are so very small that we are wont to despair of seeing this miracle performed.

There are many interesting things in Nature that we can observe in our daily life without bothering with the dry problems that confront scientists, and this is one: Flowers live by insects and insects live by the flowers. Nature's provision in flowers is wonderful. Their hoods contain nectar, which emits a strong odor, effectively advertising it. This odor is very pleasing to the bee's sense of smell and will attract her. The bee, clinging to the flower, as it gathers nectar, catches its foot in slits between the nectar-cups or hoods; as it leaves the flower a foot is released by drawing it up through the slit, dragging with it two club-shaped masses of pollen. It flies to another flower and, while continuing the process of gathering nectar, draws a pollen-mass into the same sort of slit that caught its foot before, whereby some of the pollen will break off and is left where it can effect cross-fertilization.

We can see from this observation that the plant was assisted, to a great extent, by the bee, but the plant uses Nature's gift, the nectar, to attract the bees. For, the bee, to get the nectar, alights on the flower and thrusts it proboscis down into the nectar-cup for a sip.

There are certain flowers that open at certain time of the day, and others open only at night. Now this is not the result of chance. Certain flowers depend upon certain insects for fertilization, and they open when those particular insects are on the wing. Flowers sometimes appear to act as if they were endowed with human intelligence. Cut some fine branches of a laurel (sweet bay) from the outside and put it into water in the house. Now, the flowers you have cut and taken into the house will last longer because they are waiting for the insect on which they depend for fertilization, and from which they have been separated by your bringing them into the house. It is also said that some tropical orchids last longer in hot-houses here than they do in their native state, for the same reason.

It may be well to bring up here this fact, which bee-keepers, no doubt, have observed, and that is, that bees visit but one species during each trip.

I saw an article in the Metropolitan and Rural Home from which these few lines are taken:

"We think there are years when the seasonal conditions make bees almost the entire dependence for fertilization. At other times, it seems that bees are not needed at all, because other insects and winds furnish satisfactory fertilizing agencies."

I would suggest that a wet season would require the bees' work. In that condition the flowers and pollen are moist, and therefore the pollen cannot be so well transferred to other flowers by winds. The bee is built for its work on business principles. Hair is situated on its hind legs and form a pocket in which pollen can be carried home, the ultimate use of which is for food for the young.

The bee is covered with pollen in passing from flower to flower, so that it can scarcely help passing the pollen to the stigma of the flower. Henry Co., Ohio.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Letters from the Sisters Appreciated.

I have received so many nice letters regarding the "Sisters' Department" that I feel like writing a personal letter to each in reply, but for lack of time I must content myself by saying through the Bee Journal how much I appreciate them, and I want to express my sincere thanks to each of you for them. If you knew how much good your letters have done me, I am sure you would not hesitate to write again.

I feel sure the department will be improved for our becoming better acquainted. E. M. W.

Hiving Swarms on Tall Trees.

On page 232, Miss Wilson gives interesting experiences of hers in hiving a swarm of bees clustered upon the limb of a tall tree. And she calls upon the other sisters to tell how they do it. Now perhaps she may allow me—an admirer of the Sisters' Department in the Bee Journal—to tell the manner of my doing it in one particular case.

Surrounding my bee-house are many trees, most of them small with the exception of three, two of which are apple, one elm. Well do I remember, a few years since, upon a beautiful May morning, the voice of my wife calling out: "Bees are swarming, come, quick!" Of course, like all good and obedient husbands, I hastily donned my hat and obeyed the call, finding the air full of bees, which had just begun to cluster upon the tall elm on a large limb, fully 30 feet from the ground, and not over 4 feet from the body of the tree. I watched them all cluster, and then said to my wife: "I will never risk my life up there to hive those bees."

Now, I was made happy in hearing her say: "I would not try to get them. Let them go."

(Of course, I could not but think my life was not insured for her benefit). But I rather wanted those bees, it being an extra large swarm, and an effort to save them could not meet with more than failure, although a wholly and untried one with me. So, getting a pole some 18 feet long, tying a brush upon the end, with a 20-foot ladder resting against the body of the tree, I ascended the ladder to give them a brushing-off the limb, and start them for the woods or some other place. Of course, the air was full of mad bees, but I soon discovered they were clustering upon the top of the tall apple-tree. I went at them again before they had all clustered, and they went for me, too. But their next move was upon a small plum-tree in the garden, from which I secured them without further trouble.

Hampshire Co., Mass. Joseph Blake.

"If at first you don't succeed, try, try again." You certainly did deserve being rewarded with success for your perseverance with that swarm. But say, while you were working so hard for those bees, didn't you wish you had clipped the wings of your queens? It would have been fun to sit in the shade and watch those bees come back. Now, wouldn't it?

Drawn Comb for Swarms—Drone-Comb Withheld from the Brood-Chamber.

1. If you hive a swarm on 10 frames of drawn comb will it not detain them longer than is desirable from going into the sections?

2. If drone-comb is withheld from the bees in the brood-chamber, will it not force the queen into the sections, where queen-excluders and full sheets of foundation are not used in the sections? L. S. R.

Answers.—1. Yes, I should think it would; but why hive them on 10 combs? Why not give them only 4 or 5 combs at first, filling up the rest of the space with dummies, then after they have filled the ones they have, perhaps in 10 days, give them the rest. That would give better results as far as the sections are concerned.

2. If there is little or no drone-comb allowed in the brood-chamber, there is a very strong inducement for the queen to go into the sections under said conditions, and she will be very apt to do it, if no excluder is used. Even with full sheets used in the sections a few drone-cells will sometimes be squeezed in the sections for the queen to lay in, and more than once I have found a queen-cell built in one corner of a section from which a young queen had emerged.

But with full sheets of foundation in the sections there will be so little trouble that it is not worth while to use excluders.

Getting Langstroth Hives—Uniting Swarms.

I am glad to be remembered in regard to the bee-keeping sisters' department. I have no suggestions to make in regard to its improvement.

I have 19 colonies of bees. I have always helped my husband with the bees, but since I have lost my husband I will try to take care of them myself.

1. Can you tell me where I can get the Langstroth hive? If so, please let me know.

2. I would like to know if I could unite two or more swarms of bees in the swarming season. That is, if I should have one swarm to-day and another to-morrow, could I unite them? Mrs. A. W. Tabor.

Bremer Co., Iowa, May 19.

Answers.—1. In the fullest sense of the word, any movable-frame hive is a Langstroth hive, as Langstroth invented the movable frame. The one most commonly in use is probably the dovetailed hive, and can be had from almost any dealer in bee-keepers' supplies.

2. There is little trouble in uniting swarms that issue on the same day, and there may be no trouble in uniting them if they issue a day apart, or even several days apart. But you may have trouble trying to unite a prime swarm and an after-swarm that do not issue at the same time.

Honey as a Health-Food is the name of a 16-page leaflet (3½x6 inches) which is designed to help increase the demand and sale of honey. The first part is devoted to a consideration of "Honey as Food," written by Dr. C. C. Miller. The last part contains "Honey-Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by every one who has honey for sale. It is almost certain to make good customers for honey. We know, for we are using it ourselves.

Prices, prepaid—Sample for 2 cts.; 10 for 10 cts.; 25 for 20 cts.; 50 for 35 cts.; 100 for 65 cts.; 250 for $1.50; 500 for $2.75; 1000 for $5.00. If you wish your business card printed at the bottom of the front page, add 25 cts. to your order. Send all orders to the Bee Journal office.

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

SHADE OF MULBERRY-TREES.

Crossed his mulberry-trees with squash-vines—'pears like! They reach out in every direction and shade a whole apiary with two trees. No use for the rest of us to hanker after them, seeing we have not California's stimulating climate to make them grow. The miniature forest of props needed to hold them up is an item on the undesirable side—but can be endured I reckon. In fact, we are not reasonable to ask for a shade that shall encumber the ground not at all, like the cloud over the Tabernacle. Page 258.

CLEANING OUT UNFINISHED SECTIONS.

It's quite true that bees show surprising contempt for honey in granular form—kick it around here and there, and oft leave in the cells, for the time being, whatever granules gravity and inertia may keep there. While a cell is in that condition they don't put nectar in it, I reckon. What I would like to know is, What measure of cleaning and polishing do average bees on an average occasion give to their store-comb? Not the exquisite work they put on brood-comb, I fear. The rogues won't do such work in advance much. Whatever they do they do off-hand—in goes the honey, and then we cannot see, as we can in the cases where an egg is put in. I *think* they usually rub over all the territory at least once and remove debris. To a bee a honey granule is a small brickbat. Don't believe it is their habit to leave brickbats in their storage-space. Still, I'd give a yoke of my six-legged oxen to be sure of it. When every bee is loaded with nectar and nowhere to put it, and just then a super of baits is put on, perhaps, under the pressure, there may be much less cleaning done than usual. Wish I knew. More or less small debris is often worked into wax, and some fine granules may go the same way. How much harm would they do? My theory, you see, is inclining dangerously toward spring cleaning. My practice is worse yet—no cleaning at all. I have very few of these sections, comparatively. One or two to a hive is usually all I can muster when it comes time to put on sections. To that small extent I deliberately put them on, honey, granules and all. My June flow is very fickle; and I figure it that more than half the time they will be cleaned out in the best style of the art before any honey is put into them. Think it a good thing to familiarize the bees with the new space just given them. And in the cases where the baits are not entirely emptied they are worked upon considerably and at once. This is anent the Doolittle-Wilson talk, on pages 262 and 312.

QUILTING SWARMS DOWN.

Yes, when the bees have actually swarmed, and you have stopped them for once by quilting them down, then's a good time to make your shaken swarm. 'Spects my bees would get out and into a tree, somehow, unless those quilts were manipulated with great vigor and adroitness. Page 264.

THE TELEPHONE, CHRISTINA AND THE COOK.

"It don't vas perfect yet"—the telephone where they gave him the colored cook when he asked for his Christina. Should say so. And bee-keeping, it's just that way, too, in forty different corners. We anticipate Christina, and the colored cook turns up. And that is where the genius of the thing comes in, in making the best of the cook, and letting Christina go. Order ham and eggs. Page 267.

A RARE "BEER" AND HIS BEES.

Here's a rare kind of Beer (wish the other kind was as rare)—a man 13 miles from any other bees. His bees, seen two miles from home, and three miles from home, add new evidence to the old that bees don't mind a little distance. I note that it was, in one case, nothing more phenomenal than garden gooseberries that they were after. Page 270.

"THE FOOT-PATH TO PEACE."

Thanks for the display paragraph that opens No. 18. No danger of our being too often reminded that neither honey nor cash are exchangeable for peace. Without regard to "views" we all know that something to love, and something to hope for, and quiet satisfaction of heart, are what we want. However absurdly we may scramble away from it we want it still.

SIZE OF THE TWIST OF A TWISTING BOARD.

On page 276 you're away off in your mathematics, dear Boss—at least so it seems to me. Halving a twisting board reduces the twist to much less than half. We see that the clearer if we look in the other direction. Suppose a 14-inch board twists one-quarter inch, how much should a 28-inch board twist? Correct answer should be one inch, not one-half inch merely. The added 14 inches has its own twist, and the benefit of the other one's also.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Forced Swarms—Separating Swarms.

1. Is it a good time to make forced swarms when the bees begin to hang out?

2. Should supers be given bees before such swarms are made? If so, which colony should have it? And about how soon, under favorable conditions, will the other colony need a super?

3. When several swarms go together, how is the best way to separate them so as to have a queen for each? New York.

Answers.—1. You can't depend upon them hanging out. You can tell better by looking inside the strongest colonies to see whether they have started queen-cells.

2. Yes, give supers as soon as the harvest fairly commences, or a little before; give the super of course to the old colony, as there is yet no other; leave the supers with the swarm, and give the super to the old colony when it becomes strong enough, *if* it becomes strong while the harvest lasts.

3. One way is to use a tin dipper to measure out enough for each swarm.

Perhaps Poisoning or Bee-Paralysis.

Enclosed find a few bees. What do you think about them. I have 18 colonies of bees, and among them there are quite a number of colonies that are, it seems to me, killing off lots of bees, as I can find a handful of dead bees in front of the hives. These enclosed are some that were strewn around. I have been watching them and trying to find out what was the trouble, but as yet cannot find any cause. Those enclosed have a red stripe around their body instead of a yellow one.

The bees seem to be at work carrying pollen, but all day I can find a lot of them in the grass, crawling around and waiting for death to come. Illinois.

Answer.—Nothing can be told from appearance of the bees, but from what you say it is quite possible that it may be either a case of poisoning or of bee-paralysis. If poisoning, of course there is nothing to be done; and if paralysis, you will probably find the trouble disappear of itself, although farther south paralysis is a very serious matter. Unfortunately no reliable remedy for paralysis can be offered.

German Bee-Paper.

What is the address of a German bee-paper that treats exclusively of bees? Washington.

Answer.—Praktischer Wegweiser, Oranienburg-Berlin, Germany.

Bienenwirtschaftliches Centralblatt, 32 Georg strasse, Hannover, Germany.

Leipziger Bienenzeitung, Taubechen weg 19, Leipzig, Germany.

Bienenzucht, Thuringia, Germany.

Bees Lost in Winter and Spring.

Being a beginner in the bee-business I take the liberty of submitting the following facts for your consideration:

Last fall I had 7 colonies of bees in box-hives. One colony died early this spring, the bees being found dead on the bottom. Three more of the hives have but a handful in each box and are getting less every day. The hives contain plenty of honey and combs. The boxes were single-walled with no protection from cold, which was severe last winter. The top cover of the boxes was filled with chaff. Bee-keepers in general around here have lost about 75 percent of their bees during last winter and this spring under similiar circumstances to those mentioned. What can be the cause? and what the preventive of a similar occurrence? UTAH.

ANSWER.—It is possible that there may have been some special reason about which I know nothing, and it is also possible that there may be nothing more than unusually trying weather. If the trouble was the unusually severe winter, then the remedy is better protection, or else cellaring. If there had been protection on three sides as well as on top, the result might have been different. A windbreak on the side or sides subject to severest winds might also help.

Queenless Colony Uniting with a Neighbor's Different Kind of Bees.

1. My bees wintered well with corn-fodder set up on the north and west sides. I lost two colonies this spring that were queenless. I had two colonies in box-hives, apparently strong in April. They were not more than six inches apart. They seemed to be very neighborly with each other. They would mix together and crawl from one hive to the other. Finally, I discovered robber-bees lurking around one of the hives, and so I examined the hive and there was not a bee in it. I pried it to pieces and got 20 pounds of honey out of it. Don't you think the bees deserted the hive and went with the other colony that was strong the first of April?

2. You will find four bees wrapped up in paper in this letter. They are honey-bees, but I do not know what species. Will you tell me what kind of bee it is? I caught them gathering honey from ground-Ivy. There are quite a good many. They are like our honey-bee, but they have long horns or smellers on their head, and they have no stingers. There are two which are smaller than the other two, but I think they are the same kind. I have kept bees for 25 years and never saw any bees like them.

Since I started this letter I have caught some more of that new kind of bees, that have a white or yellow nose. ILLINOIS.

ANSWER.—1. Your surmise is very reasonable. The colony probably was queenless, and when its near neighbor began appropriating its stores it joined in with the marauders. The only thing that seems strange about it is that you should have found any honey in the hive, but perhaps you came upon them too soon for it to be carried out.

2. I am sorry to say I'm not an entomologist, only a practical bee-keeper, and I don't know enough to be sure about different kinds of bees except hive-bees and bumble-bees.

Transferring and Introducing.

1. I bought a colony of bees in an old red hive, the frames running crosswise in the hive. I wish to transfer into a new 10-frame hive, painted white. To place it over the new hive so as to fit I will have to turn it one-fourth around. Will the change of position and color make any difference?

2. How soon shall I put the queen in the new hive?

MISSOURI.

ANSWER.—1. The white color and the quarter turn need not make any great trouble, but if you mean that you intend to put the new hive over the old one, with the view of having the bees work up into the new one, my advice would be, "Don't." Drum the bees up into the new hive so as to get the queen into it, then put the new hive with the queen below the other hive, with an excluder between, and the bees will start work below much better than if you put the new hive above.

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FROM MANY FIELDS

A Beginner's Experience.

I bought two colonies of bees in box-hives in 1897, and had them put into frame hives with supers the same spring, and Italian queens introduced. The work, new hives and queens cost me $5.00.

In 1898 we had two swarms; I hived one and gave the other for the hive we put the swarm in. These three colonies had but little attention, and did not swarm nor store much honey during 1899, 1900, and 1901. In the spring of 1902 I bought five frame hives and fixtures, moved my bees 7 miles to where I now live. The man who moved them could hardly understand it, that I was buying five frame hives and had only three colonies. I got him to help me transfer the three. We divided the brood from the 3 hives and made 4 colonies. They did well after the transfer, and I had 2 swarms. One came out while my wife and I were away, and we lost it. A few days after we came back another fine swarm came out. We housed them all right. I now had 5 colonies. They did well and stored considerable honey. When the winter began they had the supers about half full of nice honey, which I left with them. I looked at them twice during the winter.

About the last week in February I moved them some 20 yards out of the vineyard from the east side of the house to the south side, where I had provided a bench about 15 inches from the ground and 18 inches wide. When

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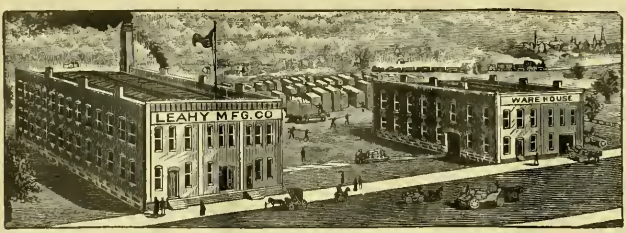

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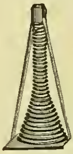

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I moved the bees I changed the supers and put the brood-chamber on top of the super. The bees, up to this time, had used but little of the honey they had in the supers.

I have just finished the work on them, and will tell what I did. As the brood-chamber was on top of the super, I commenced in the brood-chamber by taking each frame and shook the bees off of it down in front of the stand, and took off every queen-cell I could find. When I got down into the brood-chamber I smoked it from the bottom and set the super back on top of the brood. I then examined the supers very carefully, and found that the bees had used all the honey in them. I cut out all comb that was not in proper shape on the frames. I found in the brood-chamber every cell was sealed with honey or used for brood. I took from three to seven queen-cells out of each. In this operation I put seven brood-frames, and all the bees that were on them, into an empty hive and stopped them up until the next morning. This being done late in the evening, the next morning I opened the new hive at the top, gave them a few puffs of smoke. arranged the frames properly, put in the eighth frame with brood-foundation, and closed them up at the top and opened the entrance, and in a short time they seemed to be as quiet and well content as any colony on the bench.

I think my bees have done well, and I now have an abundance of bees; the hives are all very large. I have four colonies of black bees that I bought last fall, and which I worked in the same way as the above-mentioned five. I have been in business for 13 years, and so did not attend to my bees properly. I no longer have any business, and I watch the bees very frequently, and have taken a great interest in them. I now have 10 colonies, 6 Italian and 4 black. J. G. WHITE.

Crawford Co., Ark., May 8.

Orange-Bloom Honey.

I mail you a sample of pure orange-bloom honey taken from a 6-ton tank full. I am running three apiaries this season, all for extracted honey, and have already extracted 14 tons of pure orange-bloom honey, with more of it in the supers; but as bees are commencing on sage, our next extracting will be orange and sage honey. F. McNAY.

Los Angeles Co., Calif., May 19.

[The sample was very fine. It looks as if some parts of California are getting some honey.—EDITOR.]

Formalin or Formaldehyde.

I quite agree with Mr. Hasty's remarks on page 329, respecting the mix-up of the above, and as I am *not* a chemist perhaps I can the better tell laymen about it. My experience with it has been practical, and what I don't know about it might fill a volume, but I'll try not to go that far.

In the first place, so far as the laymen go, the two words mean the same. Formaldehyde bears the same relation to formalin that ammonia does to aqua-ammonia. Ammonia is a gas, and aqua-ammonia is water charged with the gas of varying strengtha up to 26 percent, after which the water will absorb no more.

Formalin is water charged with the gas—formaldehyde—usually to about 40 percent. Commercially, all we ever have to do with is formalin, so we might as well drop the longer word.

It was discovered not many years ago by German chemists, and has been largely used as a germicide. It has a peculiarly sharp odor, and produces a stinging sensation in the nose some time after smelling it. To some it is more offensive than ammonia, and would better be approached with caution on first acquaintance. It is as harmless as ammonia, however, and is good for catarrh.

As it is an absolute preventive of mold and fermentation, it has been largely used for that purpose. A few drops in a quart of milk will keep it sweet for days, or in paste will preserve it indefinitely. (Try this.)

Being so good a preservative, the milk-men, brewers, and others, have gotten "onto" it, and here is where the abuse of a good thing has come in. It has been found extremely dangerous, if not deadly, when taken into some stomachs, and is now condemned as a preservative of foods by various health departments.

It renders gelatine or glue insoluble in hot water, and is an antiseptic toughener of the skin. The German soldiers are made to bathe their feet in a weak solution of it, and to drop a little in their shoes to toughen them and prevent sweating.

As a germicide I believe it is now considered pre-eminent by the best authorities. Sheets saturated with it are now used almost universally for disinfection after contagious diseases, and it is regarded as sure death to all germs of disease.

I have had no experience with foul brood, and hope I will not have, but if I should have, I think I'd atomize it with formalin for a venture, anyway.

With apologies to Mr. Hasty.

RALPH D. CLEVELAND.

Dupage Co., Ill.

P. S.—It may be bought of any druggist, and costs about as much as ammonia.

R. D. C.

Experience with Queens—A Reply.

On page 198, Henry Alley starts off well, but he is like the bees I have in the grain region of the Willamette Valley I spoke about some time ago—he gathers poor stuff before he gets through. At least two statements in his article are not argument, and do not prove anything except that he is too set in his ways to live and learn anything new. But what does prove something is the fact that many subscribers of the "Old Reliable" and many other bee-papers are buying queens every year that never live through the first winter, and most of the colonies that receive them never yield any surplus. Then, again, in his own article he admits the Italian bee has become a tender lot and difficult to rear.

Now, Mr. Alley, I have not had the pleasure of testing any of your queens, but others that I know of have, and they didn't vary much from those I bought of a half dozen other breeders. Every queen I bought of all parties except one died the first winter, and that one spring dwindled and died the next spring, and they were all built up to strong colonies within 30 days after receiving them; in no case did any of them ever yield any surplus, while those despised blacks were filling from two to three large-sized supers for each colony.

Now, then, what would you have done under the same circumstances, wanting section honey and not queens? Well, I will tell you. You would study cause and effect, which I did and am doing, and from the results you would have drawn down your conclusions.

Now, let me give you a little account of

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	1	6	12
Untested	$1.00	$ 5.00	$ 9.00
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Yours respectfully, E. K. MEREDITH.

DAVENPORT, IOWA, Dec. 31, 1901.
Your queens are fully up to standard. The honey queen that you sent my brother takes the lead. She had a rousing colony when put up for winter. The goldens can be handled without smoke or veil. Very truly yours,
JOHN THOEMING.

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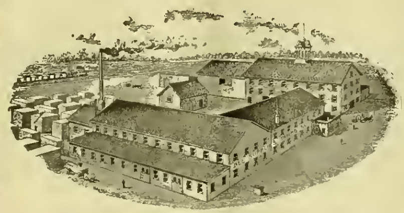

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some of the results, first stating that every year here is like the season you had there last year—more or less cold and rainy during the best honey-flow, and the nights are always cool here. Well, sir, I had 5 colonies enter the supers before apple was in, and now, May 10, with apple in full bloom, every colony in the home yard is working in the supers, and those first 5 have each 2 supers on and over half full, and they are all full-blooded blacks.

Say, Mr. Alley, don't you think I ought to be suppressed?

Now, to come back to the subject in hand, the queen *you* got in 1878, valued as she should be for what honey her bees would produce in surplus, was worth just that much more than the rest, as the crop from her colony would exceed that of the others, quality, etc., considered, which might not have exceeded any of the rest, nothing more. Any other value you got out of her you created by advertising and beauty, not utility.

Now, Mr. Alley, I see by your remarks about black queens, yellow queens, dunghill fowls, and up-to-date fowls, you have an eye to free advertisements yet. But, look here, don't you know that the best breeds of chickens alive to-day for producing eggs are the selected descendants of those despised dunghill fowls? Well, I am just selecting the honey-producers from among my blacks.

I am very sorry to lose my mainstay and support on queens, "Dr. Gallup," but the loss is pretty well made up by "foxy grandpa" coming to the rescue. I say, hurrah for G. M. Doolittle, and with such a man as he by my side I am ready to do battle with the world, as he uses nothing but high-pressure, smokeless powder, while Mr. Alley uses that horrible smoky stuff.

Well, I will close for this time, but will give you black-powder fellows something to roar about when I get time to write an article on laying workers, worker queens, and queens proper. GEO. B. WHITCOMB.

Linn Co., Oreg., May 13.

Bees Stinging Bright Objects—Sowing for Bees.

Tell C. Stimson to get one of the bright pendants that are used on the hanging lamps. They are of glass and cut with many faces, so that the rays of light strike from all directions, making an attractive mark. I have to wear glasses to see well in clipping queens. I don't like to wear a veil, as it not only impedes sight, but interferes with breathing, and then, as I am one of the boys of '61, I contracted the tobacco habit when camp-life had few entertainments. The veil interferes with the use of the weed. The bees had a habit of diving for the glistening of my glasses, and generally would hit the mark, then crawl under them, and get in their work on or near my eyes. I have had as many as 100 shots a day, and while the sting doesn't swell my flesh it interferes with one's comfort. So I stuck a pin through one of these pendants, and making a hook of it, stuck it in my hat. This makes a prominent mark and good target, and keeps them wondering why things are thus.

I sowed five acres of alfalfa on high clay ridge this spring. If it doesn't do well I shall resow in two years, and thus gradually get the "bugs" in that soil. We were taught in our army life that the only way to succeed was to keep everlastingly at it, and if at first repulsed (which often occurred, as our friends in the Southland were of mighty good material), to spit on our hands and try again. We must adopt these tactics in our business and never say die, but try, try again, and success will crown our efforts.

I sowed half a bushel of catnip seed last fall, in waste-places, under hedges, and along river banks. It is coming up nicely. I got some carpet-grass seed from California, and have sowed that in sheltered spots, but do not expect much from it in this climate. I have some phacelia seed from Germany that I will try. It is a fine bee and fodder plant there, an old German informs me. I have also sowed buckbush along low ground near river edge, and expect good returns. We can do much to improve our range if we will only keep at it.

Eight years ago I sowed a peck of sweet

clover seed in the gravel pit. The soil had been removed eight feet deep. It grew and flourished like a green-bay tree, but when the railroad got all the gravel the land reverted to this same old Dutchman, who got me the phacelia seed, he fenced in that 20 acres and took in the town cows to pasture. They made short work of my sweet clover patch, ate it so short that it scarcely bloomed, while over the fence, where the cows couldn't get at it, it grew 4 to 6 feet high. The cows did well on this kind of feed, and it yielded abundant feed, but I fear that it is all "up" with that part of my range, as they eat it so close, and no seed ripens, that time will call it hence to bloom no more on that spot for ever. But the investment in that peck of seed paid me well, as it furnished seed for several years, and in some way it got scattered by some "fly by night" birds, and now grows in many waste spots and roadsides where ragweed, wild sunflowers and horseweeds once flourished. There's nothing succeeds like success, and the only way to wear away failure is to keep the water constantly dropping.

I have 98 colonies in good condition, with queens all clipped last week, and am awaiting the harvest. Last season was the worst I ever saw, wet, cold, and no surplus. I lost 40 colonies in wintering, some in the cellar, some packed in leaves. Some were queenless, and more short of stores. I was sick in the fall and did not feed enough. I never lost many before. C. E. Morris.

Carroll Co., Iowa, May 16.

CONVENTION NOTICE.

Texas.—The Texas Bee-Keepers' Association meets in annual convention at the Agricultural and Mechanical College, at College Station, Texas, July 7 to 10, inclusive, during the Texas Farmers' Congress meetings. Cheap excursion rates. Large crowds. A good time. Learn a heap. Meet your fellow-men, and talk. Exhibits of all kinds of stuff. Premiums of all kinds awarded. Come, and bring what you have, and take home some of the premiums. You are invited. Be sure to be there. July 7 to 10. 1903, at the A. & M. C. of Texas, College Station.

Hunter, Texas. Louis H. Scholl, Sec.

65 Best Queen of Sixty-five 65

Belle Plaine, Minn, April, 1903.

Mr. Alley:—I have a queen received from you in 1900. Her bees are the best honey-gatherers of an apiary of 65 colonies in which are queens from different breeders—natural queens—as Dr. Gallup calls them. The Adel queen is the best of the lot. C. J. Oldeneerg.

A Tested Adel Breeding Queen and my new book giving result of 40 years' experience in rearing queens, sent by mail for $2.00. Warranted Adel queens, each, $1.00. Safe arrival guaranteed. Send for price list of queens and prospectus of book.

20Atf HENRY ALLEY, Wenham, Mass.

Please mention Bee Journal when writing.

The Emerson Binder

This Emerson stiff-board Binder with cloth back for the American Bee Journal we mail for but 60 cents; or we will send it with the Bee Journal for one year—both for only $1.40. It is a fine thing to preserve the copies of the Journal as fast as they are received. If you have this "Emerson" no further binding is necessary.

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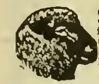

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Catnip Seed Free!

We have some of the seed of that famous honey-producing plant—Catnip. It should be scattered in all waste-places for the bees. Price, postpaid, 15 cents per ounce; or 2 ounces mailed FREE to a regular subscriber for sending us one NEW subscriber to the Bee Journal for one year, with $1.00; or for $1.20 we will send the Bee Journal one year and 2 ounces of Catnip seed to any one.

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Read what J. I. Parent, of Charlton, N. Y., says: "We cut with one of your Combined Machines, last winter, 50 chaff hives with 7-in. cap, 100 honey racks, 500 brood-frames, 2,000 honey boxes, and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make, and we expect to do it with this Saw. It will do all you say it will." Catalog and price-list free.

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Tells all about Bees in California. The yields and Price of Honey; the Pasturage and Nectar-Producing Plants; the Bee-Ranches and how they are conducted. In fact the entire field is fully covered by an expert bee-man. Besides this the paper also tells you all about California Agriculture and Horticulture. $1.00 per year; 6 months, 50 cents. Sample copies, 10 cents.

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HONEY AND BEESWAX

MARKET QUOTATIONS

Chicago, May 7.—The past winter and present spring have been a disappointment to producers and dealers in honey, in that the consumption has been away below the average of the past decade. Choice to fancy comb is held at 15@16c per pound, with off grades at 2@5c less per pound. Extracted, white, 6@7c; ambers, 6@6½c; dark, 5½@6c. Beeswax in good demand at 32c. R. A. Burnett & Co.

Kansas City, May 28.—The supply of comb honey is about exhausted. The demand good. We quote you as follows: Fancy white comb, 24 sections, per case, $3.50; No. 1 white comb, 24 sections, $3 40; No. 2, white and amber, per case, $3.00@3.25. Extracted, white, per pound, 6@6½c; amber, 5½c. Beeswax, 25@30c.

C. C. Clemons & Co.

Albany, N. Y., Mar. 14. — Honey demand quiet; receipts and stock light. Comb selling, light, 15c; mixed, 14@15c; dark, 13@14c. Extracted, dark, at 7@7½c. Beeswax firm, 30@32c.

H. R. Wright.

Cincinnati, Apr. 27.—Little demand for comb honey at present; fancy white sells at 15@16c in a small way. We quote amber extracted at 5½@6½c; white clover, 8@9c. Sales not as lively as expected this season of year. Cuban extracted is offered on all sides, and future prices are awaited with intense interest. Beeswax strong at 30c. The Fred W. Muth Co.

New York, May 21.—Comb honey trade exceptionally quiet, very little doing. Fancy stock not plentiful and is sold at 14c. A large supply of other grades on hand, which we are quoting at from 11@13c, according to quality, and in large lots make concessions from these prices. Extracted, unusually quiet, and prices show a downward tendency all along the line. Beeswax, firm at from 30@31c.

Hildreth & Segelken.

Cincinnati, May 19.—The demand for comb honey is nearly over, but as the stock is almost exhausted, prices keep up. The demand for extracted has not changed whatever, and prices are as follows: Amber in barrels, 5¼@5½c; in cans, 6@6½c; white clover, 8@8½c. Beeswax, 28@30c. C. H. W. Weber.

San Francisco, Apr. 29.—White comb honey, 12@12½c; amber, 9@10c; dark, 7@7½c. Extracted, white, 6½@7c; light amber, 5½@6c; amber, 5@5¼c; dark, 4@4¼c. Beeswax, good to choice, light 27@29c; dark, 25@26c.

Last year's product has been tolerably well cleaned up, particularly the desirable stock. Present offerings are largely odds and ends, including little of fine quality. Values for the time being are little more than nominal. A lower range of prices is looked for on coming crop.

WANTED WHITE CLOVER EXTRACTED HONEY!
Send sample and best price delivered here; also Fancy Comb wanted in no-drip cases.
THE FRED W. MUTH CO.
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$5 TO START YOU IN BUSINESS
We will present you with the first $5 you take in to start you in a good paying business. Send 10 cents for full line of samples and directions how to begin.
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If you are interested in Sheep in any way you cannot afford to be without the best Sheep Paper published in the United States.

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A Few Cheap Smokers!

We find we have on hand a few slightly damaged Clark and Bingham Bee-Smokers, which got a little damp and soiled at the time of the fire in the building where we were about 2 years ago. They are all almost as good as new.

We have some of the Clark Cold Blast, which when new sell now at 55 cents each; and some of the Little Wonder Bingham—new at 50 cents. But to close out those we have left that are slightly damaged, we will fill orders as long as they last at these prices:

Clark at 25 cents each; Little Wonder Bingham at 30 cents each.

We do not mail any of these slightly damaged Smokers, but will put them in with other goods when ordered, or sell them here at our office when called for—at the above prices.

GEORGE W. YORK & CO.,
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that the freight rates from Toledo are the lowest of any city in the U.S. We sell

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The classic in Bee-Culture—Price, $1.20, by mail.

BEESWAX WANTED at all times.

DADANT & SON,
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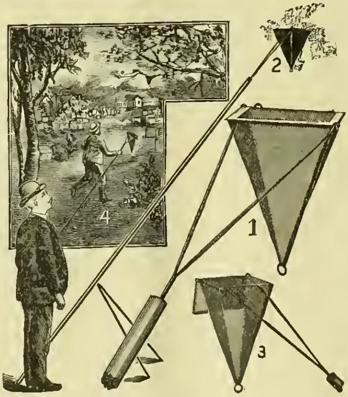
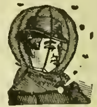
Swarming Season.



Save your prime swarms. They are worth many times the value of secondary swarms that issue during the middle, or late summer. The Manum Swarm Catcher, as shown in the illustration, is the best for this purpose. The basket is of wire-cloth with lid, and hung so that it can not be upset while suspended in air No climbing trees to cut off limbs, torn clothing, sprained wrists, etc. Shipping weight, 10 pounds. Price, $1.10.

The Alley Queen and Drone-Trap will cage your queens at swarming-time, when you have difficulty in locating them, or where you have occasion to be absent during swarming season. They are indispensable to the queen-breeder for caging drones to be taken to another yard, or for disposing of undesirable drones. Made in 12 and 14 inch length. Price, by mail, 65 cents each; by freight or express, 50 cents each; ten, $4.00.



A Good Veil is a necessity even with the most gentle bees. The apiarist can accomplish more work; there is no hesitancy on his part because of cross bees. Price, $1.00, postpaid. We have others at 80, 50 and 40 cents, postpaid.

The clipping of queen's wings is another method for securing the prime swarms. For the purpose we have a small pair of scissors which we supply at 25 cents, postpaid. See modus operandi in May 15th Gleanings in Bee-Culture.

The A. I. Root Co., Medina, Ohio,

U. S. A.

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Nat'l Bee-Keepers' Convention at Los Angeles, Aug. 18-20

AMERICAN BEE JOURNAL

43d Year. CHICAGO, ILL., JUNE 11, 1903. No. 24.

WEEKLY

C. J. WARD AND APIARY, OF JEFFERSON COUNTY, WISCONSIN.

THE AMERICAN BEE JOURNAL.

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DEPT. EDITORS,
DR. C. C. MILLER, E. E. HASTY, EMMA M. WILSON

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2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

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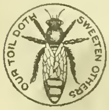
A Celluloid Queen-Button is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-lapel. It often serves to introduce the subject of honey, and frequently leads to a sale.


OUR TOIL DOTH SWEETEN OTHERS

The picture shown herewith is a reproduction of a motto queen-button that we are furnishing to bee-keepers. It has a pin on the underside to fasten it. Price, by mail, 6 cents; two for 10c; or 6 for 25 cents. Send all orders to the office of the American Bee Journal.

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The book contains 328 pages, is bound in handsome cloth, with gold letters and design; it is printed on best book-paper, and illustrated with over 100 beautiful original half-tone pictures, taken by Dr. Miller himself. It is unique in this regard.

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HOW TO GET A COPY OF DR. MILLER'S "FORTY YEARS AMONG THE BEES."

The price of this new book is $1.00, post-paid; or, if taken with the WEEKLY **American Bee Journal** for one year, BOTH will be sent for $1.75.

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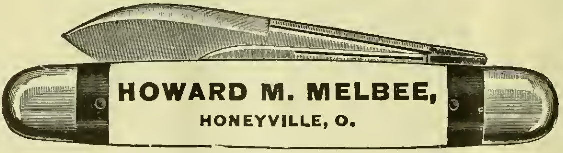
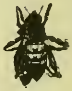
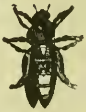




[THIS CUT IS THE FULL SIZE OF THE KNIFE.]



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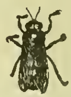
The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the subscriber, and on the other side pictures of a Queen, Drone, and Worker, as shown here.



The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a last-time, with proper usage.

Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the "Novelty" is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the "Novelties," your POCKET-KNIFE will serve as an identifier; and in case of death, your relatives will at once be notified of the accident.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid for $1.25, or give it as a Premium to the one sending us THREE NEW SUBSCRIBERS to the Bee Journal (with $3.00.) We will club the Novelty Knife and the Bee Journal for one year, both for $1.90.

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☞ Please allow about two weeks for your knife order to be filled.

AMERICAN
BEE JOURNAL
Establisht in 1861
The Oldest Bee-Paper in America

43d YEAR. CHICAGO, ILL., JUNE 11, 1903. No. 24.

Editorial Comments

Text-Books on Bee-Culture are things of exceeding importance. Beginners are sometimes puzzled to know what is meant by a text-book. Well, a text-book on bee-culture is simply a book of instruction, telling something about bees and their habits, and giving advice as to the care of them. The beginner who is trying to keep bees without having a text-book, even if he has only a single colony, is making a great mistake. None of the text-books costs much more than a dollar, and the beginner in ignorance of the principles of bee-keeping may easily make a mistake that will cost him a good deal more than a dollar in a single season.

It is a serious mistake to think that for a time the beginner will get along all right with a bee-paper, and after he has had more experience it will be time to get a text-book, or, as some call it, a bee-book. A bee-paper comes in to supplement a text-book, not to take the place of it. If you can have only the one, by all means get the text-book, though no one should think of keeping up-to-date without a paper also. But the text-book is the thing of first importance, and should be faithfully studied from the first minute you come in possession of a colony of bees, or, still better, before you get any bees at all.

Second Swarms Should Be Prevented, as a rule. This item is for beginners, and older readers can skip it. If colonies are left to themselves, they will generally send out a second swarm, sometimes a third, and even a fifth or sixth, although the latest issues are likely to be very small indeed. The beginner may feel pleased at the thought of so much increase, but sooner or later his greatest desire will be to prevent all swarms after the first, if indeed he does not desire to prevent even the first issue.

It is not a very difficult thing to prevent after-swarms. When the prime swarm is hived, set it on the stand of the old colony, putting the old colony close beside it. A week later remove the old colony to a new stand. All the field-bees from the old colony when they return from foraging will now go straight to the old stand, joining the swarm. That will greatly weaken the old colony, and at the same time stop the carrying in of all nectar. Being weakened by the loss of bees, and discouraged at the apparent cessation of the harvest, the bees will give up all thought of further swarming, allowing all queens to be destroyed in their cells by the first one that emerges.

Apple-Blossom Honey.—Fruit-bloom is counted of much importance because it comes at a time to aid greatly in building up colonies in strength for the coming harvest, but probably few have thought of it as a source of any considerable surplus. G. M. Doolittle, however, has expressed the opinion that if colonies were strong enough at the time of fruit-bloom, it might be the source of considerable surplus. But a yield of 100 pounds a colony would seem surprising. J. A. Crane says in Gleanings in Bee-Culture:

> This county (Wayne) stands fourth in the United States as an apple county, and we can "know it last fall" whether the orchards will blossom or not this year: and also that, if the weather is favorable. and our bees in shape, we shall get honey.
>
> In 1901 I extracted from three hives (supers and brood-nest) three times in ten days, taking from each, at each extracting, a 12-quart bucketful of honey. Ripe? Yes, it weighed 12 pounds and 3 ounces per gallon. It candied solid the next January, and was pure white—nearly 100 pounds per colony. My whole yard averaged over 50 pounds per colony. Now, don't think I mean to say that such a crop can be secured *every* year; but I have had four yields of apple-blossom honey to three of basswood, so I think it well worth working for, seeing that you need prepare for it only when the trees are going to blossom full.
>
> Now about the quality. I retail all, or nearly all, of my honey; and when a customer has once had apple-blossom honey he will always call for it again, although I have several other kinds—raspberry, clover, basswood, and generally buckwheat.

Danger of Easy Increase.—That a colony of bees, or any part of a colony, when left without a queen will proceed at once to rear a queen from a worker-grub—if such a grub be present—makes it seem a very easy matter to increase the number of colonies with great rapidity. Therein lies a danger to beginners—a very great danger. If a beginner has a colony with six, eight, or more frames of brood, he thinks that all he needs to do is to put a frame of brood with adhering bees into each of six, eight, or more hives, and, presto! there he is, with six, eight, or more colonies. If he acts upon that thought he will be very sure to rue it. Let him study carefully in his text-book some of the principles that should govern in such matters, and then he may act with some intelligence. As a further help, some hints will be given in these columns in the present and subsequent numbers which it will be well for the novice to study carefully.

To Provide Ventilation When Moving Bees, a common way is to use a screen of wire-cloth covering the entire top, a wire-cloth screen also closing the entrance. Gleanings in Bee-Culture gives the following ingenious way to save trouble and expense:

> Instead of using an ordinary wire-cloth screen, take some pieces of one-piece section, $\frac{1}{8}$-inch thick, and lay one piece at each of the four corners, on top of the hive-body. The cover is now set on top, and, as will be seen, there will be a $\frac{1}{8}$-inch crack on the sides, front, and rear, between the cover and the body, and just narrow enough to exclude bees. The knee is now placed on the cover, when a crate-staple is driven in, spanning the body and cover just opposite or near one of these section-pieces. With wire-cloth nailed over the entrance, and the cover secured $\frac{1}{8}$-inch above the hive-bodies, we get sufficient ventilation, even on hot days, if the bees are not to be moved more than about two or three miles. But I would not move during the heat of the day. Let it be in the morning or evening.

Still easier, and perhaps just as good, is the plan of having a bottom-board two inches deep. The wire-cloth at the entrance is then large enough to give sufficient ventilation without any ventilation at the top.

Control of Fertilization Not an Unmixed Good.—In our chagrin at the thought of failure to be able to control fertilization, one item may give us a crumb of comfort. If we were able to select the individual drone to meet a certain queen, it would ~~very~~ likely be in most cases at a distinct loss. To a certain extent it is well to have the selection in the hands of the bee-keeper. He can suppress the rearing of drones in all but those colonies which have shown themselves superior. This he should do, although in most cases heavily handicapped by the fact that he has no control of the drones in neighboring colonies.

Having thus made a selection by suppression, is he competent to make the further selection of the individual drone? He can judge only by the looks. Can he tell by looking at two drones which is the more active? which has the greater wing-power? It is perhaps fortunate that this selection is left to Nature, and that in the race after the queen in the upper air the feebler drones drop out of the race one after another, and finally the fittest—the one with the best wind and wing—remains as the successful suitor.

If the man can select the colonies in which drones are to be reared, is it really desirable that he should have any further control in the matter of selection?

How to Hold a Bee-Smoker.—"To my notion," says Editor Root, "there is only one way......the thumb should be on the side of the bellows next to the stove. This lets the hand hang in the natural position without any twist at the wrist." It would be interesting to know how many have notions exactly the opposite.

Dividing a Colony into two equal parts and allowing the queenless part to rear its own queen is a plan that generally suggests itself to a beginner. The following, which has just been received, is a type of a good many questions sure to occur at this time of the year:

"Can I divide a colony of bees and put half the frames in a new hive? Would they rear a queen of their own if they had brood? and would I better put the queen in the new or the old hive?"

The plan as suggested may succeed after a fashion, but it is hardly the most advisable plan. It is, however, so easily carried out, that in spite of its disadvantages it will probably be more or less practiced. By a little added work, the plan may be greatly improved. Put half the frames with adhering bees and the queen in the new hive. Three or four days later, without opening the hive, make the two hives exchange places. The result will be better than to leave the queen permanently in either place.

Association Notes

Mr. A. I. Root and Dr. Miller expect to travel together from Chicago to the Los Angeles convention. So there will be at least "two boys" at the great meeting.

Poisoning Bees.—General Manager France reports that a Wisconsin bee-keeper, on May 10, seeing that his neighbors' bees were robbing his colonies, closed his hives and exposed some honey mixed thick with Paris green. The result was that several apiaries were badly poisoned, and possibly other serious troubles. Mr. France was to settle the case June 2.

Over in Canada a noted case has been won by the National—damages from bees. We have not as yet learned the particulars. There should be more members of the National in Canada. And then there should be a member of the Board of Directors over there. We are in favor of having the next vacancy in the Board filled by some good Canadian bee-keeper.

The Santa Fe Route will be the one over which the majority of bee-keepers of the East will travel to Los Angeles. We are hoping to get together a large party of bee-keepers to start from Chicago over that route, and stop off one day at the Grand Canyon of the Colorado River in Arizona. Doubtless there will be a number of other bee-keepers who will join the party all along the way, so that by the time Arizona is reached it should be a large company. We will give full particulars later as to time of leaving Chicago, etc.

The National Bee-Keepers' Convention, as all bee-keepers know who read the bee-papers, is to meet in Los Angeles, Calif., Aug. 18, 19 and 20 next. The meeting will be held in Blanchard's Music Hall, 233 South Broadway. Mr. Geo. W. Brodbeck, President of the California National Honey-Producers' Association, has in charge the local arrangements, and writes us that it will be less difficult to make provision in the way of hotel accommodations in Los Angeles than any other place that could be found. He says they have so many large rooming houses scattered all over the city, that thousands who go there every season are well provided for; and it seems to be the rule for people to hire rooms and take their meals out, so that rooms in any quantity can always be had, and meals from 15 cents up to any price one may wish to pay. But a good meal can be had for 25 cents. Mr. Brodbeck says that the matter of lodging and meals will eventually be handled by a hotel committee, so that accommodations will be secured for every one who goes to the convention.

Mr. Brodbeck also writes that we can put them down for a "California Welcome" on the first evening of the convention, which is Tuesday, Aug. 18, in Blanchard's Music Hall, which Mr. Brodbeck says is an ideal one for holding meetings.

We trust that every bee-keeper who can possibly arrange to be present will attend this convention. Being held in the great honey State of California, and also in a part of the country which every one who has not yet visited it should desire so much to see, it seems to us that the temptation to go will be so great that it can not be resisted. On account of the exceedingly low railroad rates in August, we believe there will be a great representation from the East. Of course, the Western bee-keepers will simply swarm to Los Angeles. We should not be surprised if it would be the most largely attended convention the National has ever held. We hope it will be. Mr. Brodbeck writes that every one says, "I am coming."

HON. H. W. AUSTIN.

Hon. H. W. Austin, whose portrait is presented herewith, is one of the new members of the Illinois Legislature, and was perhaps the one most instrumental in securing for bee-keepers the new law, which we published on page 308, and to which we have referred several times in these columns recently. Mr. Austin is a resident of Oak Park, one of the finest and most delightful residence suburbs of Chicago. His fidelity to the bee-keeping interests of this State, as well as his successful efforts in behalf of its bee-keepers, will be appreciated by all.

We are pleased to present to our readers Mr. Austin's picture, as well as an expression of appreciation of his services. He will have the satisfaction of knowing that he not only did his full duty, but invested his efforts in a cause which was entirely worthy, and well deserved the law which was secured through his efforts and that of others.

Miscellaneous Items

Mr. Thos. Wm. Cowan's Return to England is noted in the British Bee Journal for May 21, he having arrived with his wife on May 14. It had been about five years since they left England for California, where they have lived ever since. Several weeks ago we mentioned the fact of their returning to England, and that upon leaving their California home a grand demonstration was given in their honor. Mr. Cowan is Chairman of the British Bee-Keepers' Association, and has been ever since its organization. A very cordial reception was given him by the Association upon his return. All our readers will be pleased to learn of the safe voyage of Mr. and Mrs. Cowan to their homeland; but if they are not careful, the United States will be considered as their "homeland," although the British Bee Journal says it knows that Mr. and Mrs. Cowan will never cease to regard England as their "home," wherever they may be.

Mr. N. E. France, of Wisconsin, reports that the upland basswood timber has very little blossom buds this season, but that in the valleys it is better. On May 30 Mr. France received his reappointment as State Inspector of Apiaries for two years, under the new law, which grants $700 per year, including expenses. Mr. France expected to start out on his official duties June 1.

Convention Proceedings

Chicago-Northwestern Convention.

Report of the Chicago-Northwestern Bee-Keepers' Convention, held in Chicago, Dec. 3 and 4, 1902.

BY OUR OWN SHORTHAND REPORTER.

(Continued from page 293.)

SECOND DAY—Morning Session.

The convention was called to order by Pres. York, at 9:30 o'clock.

The first number on the program was the following address by Mr. W. Z. Hutchinson, on

COMMERCIAL ORGANIZATION AMONG BEE-KEEPERS

Nothing is truer than the fact that times and conditions change. Regarding the conditions and peoples of this continent in ages past, we have little else than conjecture; but so far as the present race is concerned there came, first, discovery, then settlement—the clearing away of the forests and the building of homes. Nearly all that was accomplished was the result of individual effort; and mainly with the bare hands unaided by machinery. Next came labor-saving machinery, and the beginning of organization in the shape of factories. At first there was much opposition to machines—they robbed men of an opportunity to labor. But then, as now, opposition to progress is useless.

The wagon-maker who made wagons by hand, sawing out the felloes, and shaving out the spokes, found it simply impossible to compete with the factory with its system of specialty, organization and machinery. The individual wagon-makers may have protested against organization, just as some of us now protest against the great organizations called "Trusts," and it is probably true that it inconvenienced them temporarily, and caused them to seek other employment, but the great mass of people who use wagons were benefited; and so were the individual wagon-makers benefited by this same process being introduced into the production of nearly everything they were compelled to buy.

This country has now reached what might be called the age of organization, and the industry that fails to catch the spirit of the times, and act accordingly, will eventually find itself in the position of the man who would now attempt to make wagons by hand. Organization begets organization, in fact, compels it. When the mine owners organize, the laborers must do likewise or be crushed. There is more than one industry in this country that would have been crushed out of existence had not the men who were engaged in it organized.

The best illustration of which I ever heard regarding the effect and value of organization was the act of an old man whose large family of boys failed to live and work in harmony. He gathered up a handful of sticks equal in number to his number of boys, and tying them up in a bundle gathered the boys in a group, and said he would like to know if he had a son strong enough to break the bundle of sticks. Each in his turn put the bundle over his knee, and strained with all his might to break the united strength of the sticks. All to no purpose. The father then untied the bundle, and handed a stick to each boy, saying: "Let's see if any of you are stout enough to break one stick." One contemptuous jerk of the stick across his knee was the emphatic answer of each boy.

It is not necessary to repeat the sermon that the old man proceeded to preach to his sons, but it is well that we take the lesson to heart.

As we are now selling our product we are competing one with another. We don't exhibit the business sense of even that despised class of people—the saloon-keepers. They never cut prices. With them, so I have read and have been told, the price of a glass of beer is always 5 cents. With us the price of a pound of honey is that at which our poorest or most unfortunate member is compelled to sell, as he must have the money.

I doubt if there is a bee-keeper in this country—one who has given the matter serious thought—who does not believe that the time has come for National commercial organization. It seems as though it were time wasted to discuss its desirability—that we are ready to talk about the *how*. On this point we should gather wisdom from the past. How have other organizations been born, grown, and brought up? Most of the great industrial organizations have resulted from the amalgamation of smaller organizations; and they in their turn were made up of individuals. First, there was the individual wagon-maker, then the individual factory, so to speak, then organization of the factories into one immense combination or trust.

Such organizations of life insurance companies begin with a strong central office from which agents or organizers are sent out to establish branches. One method is that of gathering together small organizations, and uniting them under one great head; the other is the opposite—that of a central society spreading out and starting branches.

Which plan is the most feasible for bee-keepers? Colorado has an organization. California is working to establish one. Canada has in contemplation a similar move. Shall California and Canada succeed, and New York and Texas follow suit, and then shall these already successful organizations be united, or shall some strong central society like our present National Association, reach out and establish branches?

Right here it might be well to say that our National Association, as now organized, is not fitted to take up the commercial feature of organization, but its influence and machinery can be used to assist in the starting and fostering of a commercial branch or organization.

Some have opposed organization on the ground that it would be a trust. If it is an "organization" or an "exchange," it is all right, but they want nothing to do with a *trust*. Let us not be deceived by a jugglery with names. An organization, or an exchange, or a trust—it matters not what it is called—is a combination, or joining together of individuals, or firms, as corporations, for the benefit of its members. It is not necessary, nor desirable, that such benefit shall work hardships or injuries to the public. It may lessen cost of supplies, prevent the lowering of prices from forced sales by poor men, save freight charges by gathering car-load lots, and prevent gluts by means of statistics and proper distribution. It can do all this without raising the retail price of honey.

The great question at present is: "How shall we do it?" Let us discuss it. W. Z. Hutchinson.

Pres. York—The paper is now before us for discussion—"Commercial Organization Among Bee-Keepers." What have we to say? This matter was touched on in the President's address yesterday, so it may as well be discussed this morning. Has any one any questions to ask, or anything to say on this subject?

Dr. Miller—Mr. Hutchinson spent a great deal of time going over the ground to try to make us believe that organization was a good thing, a desirable thing, and then he wound up at that part in saying that there was no use in wasting time doing just what he had been doing, and I feel a good deal of force in that, and at the same time I think it the part of wisdom, for we haven't as a body of bee-keepers gotten right down to having that fact put right down in our minds, that what we need is organization. The first thing is a demand for the thing before you get it, and he has helped some little in making that demand, and then he wound up just in the right place by saying that we don't know just how we are going to do it. No, I don't know how. Some of you that do, tell us.

Mr. Hutchinson—My idea is, that we will have to form a stock company and limit the shares to the number of colonies each individual owns. Form a large stock company and then have somebody handle the honey for us so as to get an equal price for our goods. Of course, money has to be on hand in order to do business. We can't do business without money. We would have to have shares of stock and get money in hand, and then get some good man.

A Member—We have bees here in Chicago. Mr. York has built up a great business in honey here. We have opposition here. I was out here a couple of months ago trying to sell honey, and I noticed he had some beautiful honey which he had raised from the bottom of the car into the wagon. It was his own honey—"York's Honey"—and selling all the way from 18 to 21 cents a section. It is beautiful honey, of course. Now, of course, the middle men, on an average, get the biggest profit. Sell to a commission house—I haven't done it—but I hear from others that they don't get very good returns.

Dr. Miller—I believe in England that a stock company plan was tried. It didn't work first-rate. Perhaps the "locality" wasn't suited for it! It is possible, I think, in one of the West India Islands doing something of that kind, and, perhaps, making a better success of it.

Pres. York—I think those in the honey-business in Chicago are willing to go into it. You can get rid of York all right, if you want to.

Mr. Niver—I can say on that point, that the Honey Exchange would sell its honey to Mr. York. He would be the second man, not the first, and we would want to sell our honey to him. He has a method of working, and he has got to be paid for his work. He is practically a retailer—he is selling in smaller quantities than the Exchange would care to sell, and he won't be a competitor, but a customer, so that we would all get the same price for our honey. Here is the reply to that: You can't do it. There are four sections of honey. If honey was all alike, like pig-iron, you could get the same price, and there is the greatest difficulty. If we can teach the bee-keepers to get all fine honey, and make the bees and honey-flow to come at the same time, and get all one kind of honey—Mr. Baldridge said was it white or was it dark, he didn't care whether half filled or bulged out, if it was white. That's the only point he cared anything about. That's the only point Western people see or know. It isn't so in the East, but if we can get our supplies so we can produce honey practically alike in shape, then we can commence to talk about color. There is the greatest difficulty. We can't all of us get honey in shape as fine as some others, because we haven't the locality to do it in—the flowers that produce the same quality of honey—and then we are not all of us just as good as some others. There is Mr. Crane's honey, just flush with the edge of the section. This section here comes always bulged to the edge. Unless these sections are handled very carefully they will be broken, and there is going to be our greatest difficulty in our Exchange. If we have a Central Exchange, and everybody that belongs to it ships their honey there, one man with a fine lot of honey will put it through and he will get a cent or two a pound more than his neighbor in the same Exchange. He won't like that. What can we do about that? This honey is worth that much more because it is in that much finer shape. I think that is the thing that we are going to stumble on more than any other one thing.

Mr. Clarke—I think we could obviate that by the mark of the bee-keeper on the case, even though not on the boxes, and I think the Association would, of course, naturally have a better demand for those bee-keepers' honey who did attend to their business, case their honey properly, put it up uniformly, and I think that would obviate that one trouble. The man who is shipping in his honey in an improper way, both in casing and mixing, naturally his honey would stay on the market longer, and it would naturally cause a demand for the best honey, and the Association and buyers would prefer his honey to that of the man who didn't attend to his business.

(Continued next week.)

Contributed Articles

Forced or Artificial Swarming.

BY C. DAVENPORT.

I NOTICE that of late there is considerable interest in shook, brushed, or what is in my opinion, more properly speaking, artificial swarming. I think it was 8 or 9 years ago that I stated in this journal how I practiced artificial swarming by removing all the brood; and that this was the only method that would stop natural swarming, if the swarming fever had been contracted; or in other words, if a colony had started queen-cells with the intention of swarming. In such cases I found that if a single comb of brood was left, that they would often swarm just as soon as they could construct or start new cells.

I had practiced artificial swarming for some years before mentioning the matter in print, and, each year since, I have artificially "swarmed" from one to two hundred colonies. I state this simply that it will be known that I have had a good deal of experience in the matter, and this method, that I have practiced so many years, is practical and identically the same so far as results are concerned as the brushed or shook method that is attracting attention of late. For, of course, it can make no difference, so far as results are concerned, whether the bees are shook, brushed or jarred off the combs. There are, however, a good many things about this method, and perhaps I should say about any method, of artificial swarming that do make a very big difference in results so far as the crop is concerned, and if there is anything about our pursuit that requires skill and judgment, as well as a thorough understanding of one's locality in respect to the time and length of its honey-flow, it is artificial swarming practiced in such a way that as good a crop will be secured as would be had if natural swarming were allowed.

One that practices artificial swarming should thoroughly understand queen-rearing, for, with artificial swarming artificial queen-rearing must be practiced; and unless good queens are reared, the apiary will very soon degenerate. I know that as many have described the method in print the whole matter of artificial swarming is so simple that it may be successfully practiced by a novice. But one who has had a large, actual and long-extended experience in the matter can see by reading between the lines of much that has been written on this subject, that the writers have had but limited experience in the matter. In saying this I do not wish to be understood as questioning the veracity of any one who has written about this. What I mean is, that they might practice the same method the next season with entirely different results.

I am also aware of the fact that many who have had a large experience in the matter have given us much that is of great value on the subject. I would like, though, to call attention to the very important fact that in this matter of artificial swarming, locality is one of, if not *the* most important, things to be considered. For instance, one prominent writer, some time ago, in one of our journals (I do not remember which) advocated giving the artificial swarms full sets of *drawn combs* instead of empty frames. Now, let me briefly describe how that works in my locality:

The first surplus flow here is from white clover. This usually commences to yield about the first of June, but, of course, more or less according to the season. Very few colonies swarm naturally or are strong enough to swarm artificially until the flow from clover commences. Now, from a great deal of experience in this matter, I know that if a swarm, either natural or artificial, is hived on a full set of drawn combs, that from 25 to 40 pounds of this white clover honey will be stored in these same combs, when, if frames with only starters are used, most of it would be in sections.

Another thing, a swarm that is hived on drawn combs will often swarm again when these combs are full, instead of going to work in sections. But if empty frames are used, and they get started to work in the supers soon after being hived, they seldom attempt to swarm again.

When supers are placed over drawn comb it is perhaps needless for me to say that no work will be done in the sections until the comb below is filled with either honey or brood.

One thing I might say against drawn comb for swarms is, that here at least, a swarm, natural or artificial, is more apt to desert when hived on them than when empty frames are used. There is, though, one great disadvantage about using empty frames, and this is the matter of drone-comb. In this locality a good deal of drone-comb, that a swarm either natural or artificial, builds will be used to rear at least one generation of drones in, that *same season*; and a swarm that has an old or failing queen will build a good deal more drone-comb than one with a good queen, for this reason.

It is very important, when hiving on empty frames, to have strong, vigorous queens. I have found that here it doesn't pay artificially to swarm a colony until they make preparation to swarm naturally, no matter how strong they may be. But if they are to be swarmed artificially, the sooner it is done after they begin to construct cells the better. If they are not swarmed until they are about ready to swarm naturally, especially if they have one or more sealed cells, they are, after being swarmed, almost certain to swarm out or desert the hive the next day, even if a frame of brood is left them. On the other hand, if they are swarmed before they begin to start cells, it seems to discourage them, or at least they do not work with as much vigor as they would if swarmed later.

I notice that great stress is laid upon the matter of getting all the bees to fill themselves thoroughly with honey at the time the swarm is made. But this makes no difference whatever so far as their staying in the hives or the way they work. In fact, with me they seem less inclined to desert the hive the next day if they are not made to fill themselves thoroughly when swarmed. This deserting of the hives the next day is one of the greatest drawbacks to artificial swarming I have to contend with.

If I get time, and the Editor will allow me space, there is more about artificial swarming that I should like to say.

Southern Minnesota.

[The Editor says he will be glad to allow Mr. Davenport all the space he will have time to fill.—Editor.]

Organization Among California Honey-Producers.

BY HON. J. M. HAMBAUGH.

To be sure, we are away out here to the extreme limit of Uncle Sam's domain, upon the far-away Sunny Slope of the great Pacific; where lofty mountains crested with snow pierce the azure dome, and valleys that are redolent with sense-beguiling roses and semi-tropical plants every day in the year; where the rugged, chaotic mountains defy Civilization's plow-share; where the coyotes howl and the wild eagles shriek in their somber and secure retreats. It is in these remote, isolated places that the wide-awake and intelligent bee-keepers have penetrated, and that against many and divers obstacles. They have secured nectar in quantity and quality that has attracted the eyes of the nations. The name of the California honey has gone abroad in the land, and her water-white sage honey has tickled the palate and adorned the tables of the potentates of the world.

Every Californian should be proud of the name and fame of her California honey, and while our sturdy pioneers have been busy studying modes and methods whereby they could secure quantities, and that put up in packages to meet the demands of the markets and the times, there has been another class of people eagerly putting into operation methods and influences whereby they might secure the product of these toilers at the very lowest possible figures, for speculation or gambling purposes. In this race it has not been a case of the bulls and the bears.

The honey-producers in their environments, with but little machinery at hand, and that very slow-going, have been at the mercy of the bears, and have simply been fleeced, often being compelled to take less for their honey than the most of their production. And the worst feature of the business has been the grinding tendency to the smaller producer—he is the most needy, has, by the nature of circumstances, been ground the closest, while the large producers—and especially those who produced honey in car-load lots—could secure better price. These and divers other causes, to say nothing of the "fad of the times," has naturally enough brought about the idea of co-operation. Quite a number of methods have been presented, but it seems that the work was being reserved for those princes of good fellows—Messrs. Geo. W. Brodbeck and George L. Emerson—to start the ball rolling among us in earnest.

A meeting of the bee-keepers for the purpose of organization was advertised for Jan. 19, at Escondido, with Messrs. Brodbeck and Emerson to be in attendance. Their plans and methods were clearly presented, which were in part as follows:

1st. "In union there is strength."

2d. By joining together, freight-rates, supplies, and other expenses, are reduced to a minimum.

3d. By marking and sealing our honey we guarantee its purity, thus preventing the possibility of adulteration. The guarantee of purity will increase the demand.

4th. The establishment of uniform prices and grades will prevent individual competition and the consequent depression in prices.

5th. The combination of the small producer with the large one gives strength to the former and removes him from the clutches of the speculator.

6th. The entire management will be in hands of bee-keepers, with no other interests involved, assuring equal benefits to all. Facilities for storage will be provided. All honey will be graded and sealed by an official grader.

7th. Members will be permitted to retail in less than car-load lots. Advances will also be made on consignments if desired.

They also read the By-laws of the California National Honey-Producers' Association, giving a clear analysis of the work from start to finish. When an opportunity was given for the bee-keepers to take stock and seek shelter under its banners, there seemed to be an almost unanimous sentiment in their favor, and Pres. Brodbeck and Sec. Emerson left Escondido with every feeling of encouragement and belief that their work is a sure go.

The bee-keepers of Escondido have come up almost as one voice, and taken stock, and we want to see this example followed all over our State. It is time we were "getting into the band-wagon." If not, brother bee-keeper, you can depend on a continuation of past experience, and even worse.

San Diego Co., Calif.

Rearing Queens Over an Excluder.

BY HENRY ALLEY.

Mr. Doolittle, in his "No. 2," on page 295, continues to assert strongly that good queens are produced in colonies having a fertile queen. This, he says, can either be done over an excluder or by putting a division-board in the body of the hive, shutting the queen from the cells the bees are working on rearing queens. The success of this plan depends on several conditions. One condition is a good flow of honey when the bees have the swarming-fever; another condition is, when bees are about to supersede an old queen. Under the above conditions fairly good queens can be reared in a colony having a fertile queen.

Now, if one tries to rear queens in the above way after the honey harvest is over, or in the spring before the harvest commences, only inferior queens will be produced. As the honey harvest or flow is on but a few weeks some plan must be used to produce queens equally as good as are reared at the season of swarming. I assert, in the strongest terms, that neither Mr. Doolittle, nor any other bee-keeper in the world, can rear good queens in a colony that has a queen. I have tried this experiment the last 40 years in one hundred different ways. I had success only when the bees were gathering honey, or in cases where an old queen was about to be superseded. But in none of the cases I have tested could I get queens equal to those reared by bees just made queenless. Bees that have been queenless a long time will not rear good queens. Such bees come under the head of *old* bees.

One of my experiments was to cover a frame with excluder zinc, and place cell-cups within, so that the queen in the colony could not destroy them. The results was good queens so long as there was any honey in the fields. The results of rearing queens by queenless bees is so satisfactory at all times that I use the system in preference to any other. I can always get good queens in this way, but by the process of rearing them in a hive above an excluder, or in the brood-nest on one side of an excluder, the results are very unsatisfactory. Why, 'tis natural for bees to rear queens when they have no queens; but very unnatural to rear them, except at swarming time, when there is a queen in the hive. Let those who contemplate rearing queens the present season, try the queenless bee-plan, as well as above the excluder. I'll stake my reputation on the results. All who try it will report good queens.

Mr. Doolittle and I do not differ greatly on cell-cups. He thinks it is much easier to rear queens by making cell-cups and transferring larvæ. I think it much easier, in my case, to have the bees make their own cell-cups—a thing they readily do.

Mr. Doolittle thinks, in fact he says, the queen-cells made as I have them made, are "so fragile that the greatest care must be used in handling." 'Tis not so, Mr. Doolittle; you make a wrong statement. The cells built as I compel bees to construct them are heavily waxed, and can be handled roughly and thrown about the same as peanuts. Just the contrary to what you say, Mr. Doolittle, is a fact.

"Hundreds and thousands of bee-keepers have proven that bees behind or over an queen-excluding division-board are brought under the right conditions to rear perfect queens, etc." All I can say in reply is, that hundreds and thousands of bee-keepers do not understand the right conditions for the production of perfect queen-bees. By the way, I do not believe thousands, nor even *hundreds*, of bee-keepers have ever tested the plan in any way.

There is no man in the world who can rear three good queens out of one hundred above or behind a queen-excluder device, except at swarming-time. 'Tis contrary to Nature, in every respect.

A hen when she is brooding, will "set" and bring forth a fine lot of chicks. Try the old hen when not brooding and see how many chicks you can get. She will "set" standing up, as the Irishman said his hen did. Bees are broody, and ready to rear queens when they have become queenless, or are about to swarm. You can't make them rear a decent queen under any other circumstances or conditions.

The virtue is not in cell-cups, it's not in old bees, nor is it in anything else but the desire for a queen. That's where the virtue lies. Then if the conditions are all right, you'll get some good queens, Yes, Mr. Doolittle, heat, food, plenty bees of the right age, are the essential things needed in the production of good queens.

Mr. Doolittle was not the inventor of rearing queens above an excluder, even though it is in "Scientific Queen-Rearing." Dr. Tinker and myself got there as soon as any one. But I do claim that I am the first person to condemn the entire system. I tested the system to my entire satisfaction, and when I found it was all wrong I discarded it, and advised the public not to use it.

I used it one year through swarming time and had fine success. I had an idea that I would keep it the success all through the season by extracting, feeding liberally, and keeping the top hive well stocked with brood from the queen below. But I failed. The first lot of queen-cells built after the honey-flow closed were as fine, large cells as I ever saw. I thought the top-story system the most wonderful thing ever devised. When those fine cells began to hatch, the queens that came from them were no larger than common working bees. I at once discovered that I had lost about one month's time right in the height of the busy queen-season. I had no queen I could send out for nearly a month. I had to change my whole system of rearing queens, and went back to the queenless-bees method.

Here is another point that will give color to my claim, as showing the difference between the methods of rearing queens: When I first began to rear queens in top stories above an excluder, I had an idea that as soon as the cells were capped a swarm would issue, just the same as in natural swarming. Well, why not swarm as they always do, if they have reared such perfect queens in such a natural way? The fact is, the bees had no interest or heart in rearing such queens. They were unnatural queens, and that is why no swarm issued.

On the other hand, when I have taken brood from below and placed it in the top hive at the time cell-cups were given the bees to complete, the bee occasionally would start cells on the brood given them, and just as soon as the natural cells were capped a swarm would issue. Bear in mind that the cell-cups given the bees were capped several days before the natural cells were completed.

When any one compares my method of queen-rearing with his own, I earnestly desire to be quoted correctly, and I will take the consequences. Don't tell the readers of any paper that queen-cells built as I have them built are fragile. This is only a sample of how I am misquoted and misrepresented. Sing your own praises as much as you like, but don't do it at my expense. That's decidedly wrong. I am continually compelled to reply to people who persist in misquoting me, merely to boost up their own pet theories.

In an article I sent to a bee-paper on rearing queens over an excluder, I was told by the editor that Mr. Doolittle reared no queens in that way. If he does not, why on earth does he advise other people to do it?

I am of the opinion that Mr. Doolittle rears very few queens above or behind an excluder. He well knows that queenless bees do a much better job.

Disprove the fact that I cannot rear better queens by queenless bees than any one can rear above an excluder while there is a queen in the colony.

In all books I have written on the subject of queen-rearing, I am quite sure I have, in all cases, stated that queenless bees rear the most perfect queens; and it is the most natural way to rear queens, except when a colony swarms.

Essex Co., Mass.

Amerikanische Bienenzucht, by Hans Buschbauer, is a bee-keeper's handbook of 138 pages, which is just what our German friends will want. It is fully illustrated, and neatly bound in cloth. Price, postpaid, $1.00; or with the American Bee Journal one year—both for $1.75. Address all orders to this office.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Busy with Her Bees—Asking Questions.

I received your letter just as I was hiving a swarm of unruly bees. I got most of them off the tree into the hive, when the rest suddenly left and went home again. The ones that went into the hive are there yet, and seem to be contented with their new home.

I think "Our Bee-Keeping Sisters" department a great improvement to the Bee Journal, and I hope it will be encouraged more. I think we women-folks will feel more like telling our successes and troubles if we have a department of our own, and also help others along. I have often wanted to ask a question, but thought probably it wouldn't be worth answering. I think we can make this department very interesting and useful, if each one tries to do her best, and help. I will try to do my share. I will write later about myself and bees. I am quite busy with them just at present, as it is swarming-time. Ethel M. Burdette.

Hunterdon Co., N. J., May 21.

Please get over the foolish notion that your questions are not worth answering. Where would our department be if every one felt that way? If each one waited for some one else, no questions would be asked at all. The answer to a question that you may think "not worth answering" will likely be of service to a number of others besides yourself. A good motto is, "If you don't see what you want, ask for it."

It Pays to Keep a Few Bees.

I have had my bees about six years, and will say, for the few colonies I keep, that it pays to keep bees. I have only 5 colonies now, as that is as many as I can care for and do my other work, although I have had from 12 to 15 at a time, and have sold them. I find the work pleasant and profitable, and shall always try to keep a few bees. All I know about bees I learned in the American Bee Journal, and I have lost but 2 colonies. Mrs. R. Tarbox.

Ford Co., Kans., May 15.

Transferring Bees from Box-Hives.

Last year I had 15 colonies of bees given me in box-hives. As I knew nothing of their ways, and as they had plenty of stores and bees, I let them all winter in the box-hives, while I tried to learn all I could in my "A B C of Bee-Culture" and the American Bee Journal; and last but by no means least, from any "live" bee-keepers I met.

My bees wintered very well. I have lost only one colony, but their hives are all shapes and sizes, and the comb like huge sponges, so that I can not handle them in any way. I, therefore, bought new hives—dovetailed, with Hoffman frames—put in full sheets of foundation, and proceeded to transfer on the Heddon short method.

It is full fruit-bloom, and the bees have 36 acres of orchard to themselves (80 trees to an acre), so I thought the time good. Last Thursday, with the help of a hired-man, I transferred one colony, and I *know* I got the queen in. We both saw her, and I put her in myself on a bit of alfalfa. The next day, when I went to look at the hive, the queen and nearly all the bees were gone; about 50 young bees were huddled miserably together at the bottom of the hive, and there were a lot of dead bees around the next stand. I then put the old hive back on the old stand, hoping some might return, but the bees left were too weak to protect themselves, and, alas! robbers got in instead. I was at my wits' end to know what to do with them, when, fortunately, my last Bee Journal came that day, and I took the advice given "Nebraska," and put the weak colony over a good, strong one, and they seem all right so far; for which accept my thanks.

Now, will you kindly tell me—

1. Why do you think the bees left the hive? Of course, I don't like to lose the bees, anyway, but I dislike more to

think that in some way my stupid human blundering cost a really whole, busy, happy colony their lives.

2. What am I to do with the others, for I must transfer somehow?

3. Do you think it would be successful on the same plan, if I waited until 21 days after swarming? The alfalfa will then be in bloom.

4. How many colonies of bees will 425 acres of alfalfa support? Here there is very little honey from wild flowers; first the fruit-bloom, and then alfalfa.

Delta Co., Colo., May 14. (MISS) REBECCA HALLEY.

ANSWERS.—1. Your method of transferring was really making a forced swarm, and swarms will not always stay where they are put, and it is sometimes difficult to say why. One of the most common reasons is heat, or lack of ventilation. Bees are dainty in their habits, and dislike a dirty hive, but that could not have been the trouble in your case, as the hive was new. Sometimes they will leave for no apparent cause whatever.

2. Do just as you did—give plenty of ventilation, and, if you can, give one frame of brood from some movable-frame hive. They are not likely to desert the brood.

3. The plan is an excellent one to let the bees swarm naturally instead of making a forced swarm. Then 21 days later drive out all the bees.

4. I don't know, and I don't know any way that you can find out.

Drone-Brood—Laying Workers or Drone-Laying Queen.

I think the "Bee-Keeping Sisters' Department" a fine and instructive one, indeed.

1. I have a colony of bees about which I wish to ask your advice. The first I noticed wrong about them was that they were not working as hard as the others. When I examined them I found they were not very strong in bees. That was about April 23. They haven't very much sealed honey, or unsealed either, and I didn't see any brood except a few cells that are pouched out a pretty good size. Isn't that drone-brood? The other colonies are doing well, and will need the second super soon.

2. Is that colony queenless, or isn't the queen prolific, or what is the trouble?

3. If I get a new queen and introduce her, could I do it without removing the old queen, if there is one? or would the new queen be killed?

4. Can this colony, in the condition it is in, rear a new queen? The hive is an old one, but the frames are removable. I don't think the frames have ever been removed, and consequently they are badly stuck together. Maybe I would not know the queen if I saw her, although I have seen a queen-bee. ILLINOIS.

Peoria Co., Ill., May 23.

ANSWERS.—1. Yes, it is drone-brood, although in worker-cells.

2. Your colony either has a drone-laying queen or laying workers.

3. The old queen must be removed before introducing a new queen. If you get a new queen you will receive with her instructions how to proceed. If it is laying workers perhaps the best thing to do is to unite them with another colony, as it is always a difficult matter to get a colony with laying workers to accept a queen, and unless quite a colony it may be the best thing to unite in either case.

4. No, it is in a hopeless condition,

Honey as a Health-Food is the name of a 16-page leaflet (3½x6 inches) which is designed to help increase the demand and sale of honey. The first part is devoted to a consideration of "Honey as Food," written by Dr. C. C. Miller. The last part contains "Honey-Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by every one who has honey for sale. It is almost certain to make good customers for honey. We know, for we are using it ourselves.

PRICES, prepaid—Sample for 2 cts.; 10 for 10 cts.; 25 for 20 cts.; 50 for 35 cts.; 100 for 65 cts.; 250 for $1.50; 500 for $2.75; 1000 for $5.00. If you wish your business card printed at the bottom of the front page, add 25 cts. to your rder. Send all orders to the Bee Journal office.

The Premiums offered this week are well worth working for. Look at them.

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, Ohio.

BEES STORING—STIMULATIVE FEEDING.

Here's battle again. Returning field-bee gives the nectar to first convenient hive-bee, because that's the business of one section of the hive-bees. Don't do any such thing; chucks it into the first empty cell, because it can do so quicker. If this is true the bee-hunter's bees ought (at least sometimes) to return almost immediately. The way that thing stands in my mind is that they almost allow four or five minutes for time spent at the tree. And quite likely those "becauses" had better be left off till the exact observed facts are agreed on. And the unnatural conditions of an observatory hive must not be allowed too much weight. *Sometimes* a returning bee finds it difficult to get rid of a load *anywhere*. Sometimes (I think) she finds the folks at home rather greedy to take what is brought in—three or four friends at once saying, "You know me!" When honey comes in rapidly field-bees should be plenty in the super, if the second of the above views is correct. Generally almost entirely absent from the super, I believe.

And, Arthur C. Miller, this department thinks you are too free with your nevers, if you say bees never give food unless it is almost taken by force. Pretty mess of things that would make in the winter cluster! And when you deny all show of respect by workers toward queens—well, you're in for a general flight of brickbats on that point, and so just at this time I will not throw many.

As to stimulative feeding, your conclusion, as the result of many and various experiments, that it is always done at a loss, is about what some of the rest of us have been concluding; but its friends are not going to surrender on call. Page 278.

MAY CAUSE INSTEAD OF PREVENT SWARMING.

R. F. Hill's report is interesting where he says, queen and two frames of brood below, and the rest of the brood put above usually prevents swarming. I rather think that *sometimes* it would do just the opposite thing—put the swarming idea right into little noddles which had not entertained it yet. Page 279.

WATERING BEES AT THEIR DOORSTEP.

I'll request Mrs. Sarah Griffith to report later on as to the extent she succeeded in getting bees to take the water she provided at their door. The little "snipes" are inclined to wade right through water at their door, and go off to the old familiar watering-place, "whether-or-no." Page 280.

GREASE ON FINGERS MAY BE A GREATER ILL THAN PROPOLIS.

On page 283, A. Mottaz gives us a plump question: Why not carry some grease along and keep our fingers greased as a defense against propolis? Think I tried that so many years ago that I do not remember as clearly as I would like. The grease and the continual fuss of putting it on, and renewing it every time we hold to an absorbent surface for a minute, is quite a serious nuisance of itself. And if we do not entirely prevent the sticking it's taking on an *additional* nuisance partly to abolish an old one. And, let me see, doesn't the propolis and the grease sometimes work up together on the finger tips—work up into a sort of *paint* that prints the clothes wherever fingers thoughtlessly touch? If so, part of us will continue to bear the ill we have.

DOUBTFUL ON RED-CLOVER STORING.

To Guy Hunsberger, page 284, I don't mind saying that blacks, hybrids and Italians all of them work on red clover at times. But as to any of them (or any particular strain of any of them) being ready to store very much red clover honey just yet—well, I'm nicely ready to receive a whole lot of convincing before I write it down so.

WHITE CLOVER AND BUCKWHEAT IN VERMONT.

Interesting to see that in Bennington Co., Vermont, white clover has a steady reputation of yielding no honey. Bees at work lively on buckwheat, and still no significant amount of buckwheat honey in the hives—that's a common experience here as well as there. But as to some of the Vermont counties, I think they would make a fuss if you accused them of having no white clover honey.

THE ALABAMA "HOG" VS. THE OHIO.

So the Alabama human hog is captain and chief among biped porcines—takes 99 cents of a "divvy" at once, and then proposes to run a foot-race for the other cent. As you say, I'm not pushing the claims of the Ohio hog. Let him stand down the column half way to the foot. Page 287.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Queens Lost in Danz. Hives.

I have trouble with the Danzenbaker hive. I have two colonies in Danz. hives. In one the queen died. They started queen-cells and hatched out, but could find no queen, so I gave them a frame of brood with eggs and young brood. They did not start a queen-cell from this, so I just took them and placed them over my other Danz. hive, thus doubling them up.

At that time hive No. 2 had a rattling good queen. Yesterday I found some brood in the lower chamber just coming out, but there were no eggs or young brood, and I could not find a queen. So queen No. 2 must be dead, as well as No. 1. However, they have a sealed queen-cell, which will be out in a day or so, and perhaps this double colony may yet do well. I have had much trouble with queens dying in the Danz. hive. I fear the frames are too shallow, and I have about come to the resolution to put no more colonies in Danz. hives. I have 5 Danz. hives, and I propose using them as extracting supers over a 10-frame Langstroth.

What do you think of my opinion, that the queens die because the frames are too shallow? Certainly the queen is kept much closer to the entrance of the hive, and so, nearer the cold air. At present I am sorry I bought the Danz. hives, though when I got them first I thought them first-class, but experience shows me that they are not a success, at least with me.

I lost queens from both Danz. hives last year. I lost a queen from an 8-frame Langstroth hive. I also pinch many bees in closing up the frames of the Danz. hive, and may have pinched the queen in each case; but that seems improbable, though not impossible.

BRITISH COLUMBIA.

ANSWER.—I do not at all believe that the shallowness of the frames had anything to do with the death of the queens. If you will compare the Danz. with a hive having deeper frames, I think you will find that the queen lays just as near the entrance in the deep frame as in the shallow one. There is some chance that the queen might be killed between the close-fitting frames, but it is not probable that you would happen to kill two so close together in that way. It is possible, indeed probable, that when you put hive No. 1 over hive No. 2, there was a young queen in No. 1, even though you did not find her, and that caused the death of the laying queen in No. 2. Then, it would be nothing strange for the young queen to be lost on her wedding-trip.

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Bee-Paralysis—Cross Bees—Dividing Colonies.

Dr. Miller, I have picked all the meat out of the nuts you cracked for me last year. I want you to crack a few more. This time it is paralysis. In the early spring six of my colonies began to die. They would crawl all around the hive, some on their backs, some black and shiny. All had a trembling motion. All except two colonies were not close together, having three or more colonies between. I read in Gleanings that sulphur sprinkled all over the combs would cure it. I tried it, and this is what happened: In about three weeks, which was the beginning of a good honey-flow, they quit dying. Four of them began to breed up a little. The other two had good queens; they kept three or four combs full of eggs, but only one now and then seemed to hatch. The ones that did hatch looked more like a pea-worm than a bee-larvæ. I removed both queens and gave them sealed cells from full-blooded Italians. They have a lot of nice sealed brood now. This is what I want to know:

1. Was it real paralysis?
2. Did the sulphur do any good?
3. Was it the sulphur, disease in the combs, or disease in the queens, that kept the eggs from hatching?
4. If those colonies are not cured, when will I be likely to see more signs of the disease?
5. In 1901 I bought two queens from the same company. One was tested and the other untested. Both were Carniolan. The untested one is a fine layer; her bees are very gentle, while the tested was a poor layer; her bees are very cross. All her daughters that I reared last year are the same. Why was it that way, do you suppose?
6. The tested queen and all her daughters except one, and this one's daughter, have the paralysis. They were all that did have it. Is there anything strange in this?
7. Is this race of bees more subject to paralysis than any other?
8. Sometimes you tell beginners that have cross colonies to kill the queen. If they do this and the bees rear one from her eggs, won't she be cross, too?
9. If a gentle queen is mated with one of these cross drones, won't her bees be cross, too? I reared a queen from a full-blooded Holy Land queen last year. She mated where there were some cross bees. Her bees are about the meanest bees I ever saw.
10. On page 281 you told Ontario to divide his bees and put the old queen on the old stand. Would it not be best to put her on the new stand as most of the bees will go back to the old stand?
11. If I take a frame of brood from a colony that has pickled brood, and give it to a healthy colony, will they take the disease, too?

ALABAMA.

ANSWERS.—1. From your description, I judge it was.
2. I don't know. I doubt it.
3. I don't know. It may have been neither, I confess it is a puzzling case.
4. You may see signs of the disease any time, and you may not see any more of it.
5. I don't know just why, but it is nothing unusual to find different dispositions in the same apiary, just as among folks.
6. It is at least a striking fact, and it looks a little as if the queens were to blame.
7. Not that I know of.
8. I think when I have advised killing the queen that I have advised giving another queen of gentler stock. Yet a queen of the same stock would likely be an improvement, as she would meet a drone of a different stock.
9. Yes, the progeny of a drone of cross stock ought to have at least part of the disposition of said drone.
10. Just because the field-bees will all go back to the old stand it is best to have the old queen there, making that a successful colony for storing. They ought not to waste time rearing a queen.
11. Sometimes, and sometimes not.

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A Neighbor's Bees Robbing—Buying Bees.

1. My neighbor's bees are robbing mine. What can I do to stop them? They have almost destroyed my bees. If I can't buy them, what can I do to get rid of them?
2. I must buy a few colonies. Where can I get them best?

PENNSYLVANIA.

ANSWERS.—1. Any wide-awake bee will rob when it gets a chance, and if A's bees rob C's bees, it is not A but C who is at fault. C should not allow his colonies to be weak and unprotected. It will not stop the robbing if you buy the robbers, unless you brimstone them. Sometimes you can stop robbing by closing the entrance so only one bee can pass at a time, then piling up hay or grass about the hive and keeping it soaked with water. If a colony is queenless, it may help to give it a queen. This is one of the cases in which an ounce of prevention is better than a pound of cure, and it is well to keep all colonies strong, and if you happen to have a weak colony keep the entrance so small that the robbers cannot get *started* at robbing.

2. I don't know. It is expensive to get them from a distance on account of heavy express charges, and you will prehaps be able, by inquiring, to get them close at hand. Watch the advertisements, and you may see something not far away. You might also succeed by advertising your wants in this journal. If obliged to get bees from a distance, it will be less expensive to buy nuclei, and then build them up.

Maple Sugar and the Sugar Bush, by Prof. A. J. Cook; 44 pages; price, postpaid, 30 cents. This is by the same author as "The Bee-Keepers' Guide," and is most valuable to all who are interested in the product of our sugar-maples. No one who makes maple sugar or syrup should be without it. Order from the office of the American Bee Journal.

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Our Wood Binder (or Holder) is made to take all the copies of the American Bee Journal for a year. It is sent by mail for 20 cents. Full directions accompany. The Bee Journals can be inserted as soon as they are received, and thus preserved for future reference. Upon receipt of $1.00 for your Bee Journal subscription *a full year in advance*, we will mail you a Wood Binder free—if you will mention it.

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Why Not Help a Little—both your neighbor bee-keepers and the old American Bee Journal—by sending to us the names and addresses of such as you may know do not now get this journal? We will be glad to send them sample copies, so that they may become acquainted with the paper, and subscribe for it, thus putting themselves in the line of success with bees. Perhaps you can get them to subscribe, send in their dollars, and secure for your trouble some of the premiums we are constantly offering as rewards for such effort.

FROM MANY FIELDS

Honey-Flow Coming Fast.

I now have 40 colonies of bees ready for supers. I have fed them all spring. The honey-flow is coming fast. G. C. DURR.
Jasper Co., Iowa, May 29.

White Clover Abundant.

If the weather proves favorable we will get honey this year, as everything is just covered with white clover—such a crop was never known in these parts. L. HIGHBARGER.
Ogle Co., Ill., May 29.

Bad Spring for Bees.

This spring has been bad for bees. April was cool and wet, and we had a snow-storm here the 30th; and May has been but little better. So far it has rained nearly every day, or mostly evenings, so the bees had a chance to fly a little during the day, but we are behind about two weeks, compared with other seasons. I have five colonies of bees. I lost one last winter. I like the American Bee Journal. A. E. JOHNSTON.
Martin Co., Minn., May 27.

Favorable Spring for Bees.

So far this has been an unusually favorable spring for the bees, owing, I think, mostly to the large quantity of bloom on the soft maple, together with some fine weather. A colony on scales gained 13 pounds in three days, the 1st, 2nd, and 3rd of May. On April 15th it (two stories) weighed 61 pounds, and on May 5, 85 pounds—a gain of 24 pounds in 19 days. On April 28 there was brood and eggs on 9 frames—6 above and 3 below. The queen of that colony was one I received last summer. I had over 30 colonies early in the spring, but have lost several, owing to the queens being missing.

A neighbor had a swarm on the 10th of May, the earliest I have known here, but some of mine would have swarmed earlier had I confined them to one story. This has been a rather late spring; apple-blossom is only just out. W. FISHER.
British Columbia, Canada, May 13.

Bee-Keepers' Rights.

My bees have built up well considering the cold and wet spring we have had. But now we have had no rain since April 28, and we need it badly. We will have no white clover if it remains as dry as it is. I see that Mr. France thinks that we city bee-keepers ought to take care of ourselves. I do, too, so far as right is concerned, but when a neighbor strikes one of your bees and the bee stings him, then he is ready to settle an old grudge by going to the town council and putting in a complaint for damages. But he says nothing about spraying his fruit-trees and killing my bees. That is "a horse of a different color." Nor does he consider that his chickens destroy one's garden. But a swarm of bees is a nuisance to ignorant people. It is one of the best industries on this earth. I believe in protecting bee-keepers' rights. Some years ago I lost all of my bees through just such business. I stood the loss myself, yet I was a paid member of the National Bee-Keepers' Association at the time. F. MCBRIDE.
Hardin Co., Ohio, May 18.

A Good Honey-Flow.

The most of the bees in this part of the country came through the winter in very good shape. I lost only one colony by starvation. I had to feed a few colonies. We had one of the best honey-flows I ever saw. It lasted about five weeks. There was plenty of honey in the woods all the time. We also had one of the worst Aprils I ever saw. It

Thousands of Hives - Millions of Sections
Ready for Prompt Shipment.
We are not selling goods on NAME ONLY, but on their quality.
In addition to the many car-loads we are shipping to all parts of the United States, we have just made one shipment of five car-loads to England.
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28 cents Cash paid for Beeswax.
This is a good time to send in your Beeswax. We are paying 28 cents a pound—CASH—for best yellow, upon its receipt, or 30 cents in trade. Impure wax not taken at any price.
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GEORGE W. YORK & CO., 144 & 146 Erie St., Chicago, Ill.

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23A4t CREEK, Warren Co., N. C.
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to meet those who work for us. Cow keepers always have money. We start you in business. You make large profits. Easy work. We furnish capital. Send 10 cents for full line of samples and particulars.
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To Chautauqua Lake and Return
at one fare for the round-trip, via Nickel Plate Road, on June 16th and 17th, from Chicago and intermediate points, with return limit of June 23rd, account of Conference of Association of General Secretaries of Young Men's Christian Association of North America, at Chautauqua Lake, June 16-22. For full particulars, address John Y. Calahan, General Agent, 113 Adams St., room 298, Chicago. 10—24A1t

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Working wax into Foundation for Cash a Specialty. Beeswax always wanted at highest price.
Catalog giving FULL LINE OF SUPPLIES with prices and samples, FREE on application.
GUS. DITTMER, Augusta, Wis.

Headquarters FOR Bee-Supplies
Root's Goods at Root's Factory Prices.
Complete stock for 1903 now on hand. Freight rates from Cincinnati are the lowest. Prompt service is what I practice. Satisfaction guaranteed. Langstroth Portico Hives and Standard Honey-Jars at lowest prices.
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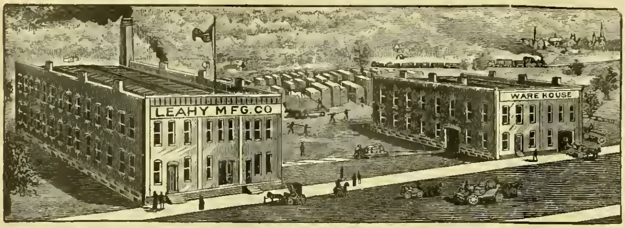

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Christian Scientists' meeting in Boston, June 28th to July 1st. It will be to your advantage to obtain rates applying over the Nickel Plate Road before purchasing elsewhere. No excess fare charged on any of our trains. Tickets on sale June 25, 26 and 27. Final return limit Aug. 1. Call on or address John Y. Calahan, General Agent, 113 Adams St., room 298, Chicago, for particulars as to stop-overs, train service, etc. 'Phone Central 2057. 7—22A5t

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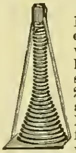

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California Excursion.

Tickets on Sale Aug. 1st to 14th.
CHICAGO TO LOS ANGELES OR FRISCO.
Only $50, round trip.
"Santa Fe all the Way"
Account National Bee-Keepers' Association meeting in Los Angeles, Aug. 18 to 20.
Permitting stop-overs going and returning, in and west of Colorado, and allowing choice of any direct route for return.
Visit the Grand Canyon of Arizona.
J. M. McCONNELL, Gen. Agt. SANTA FE 109 ADAMS ST. CHICAGO.

Marshfield Manufacturing Company.

Our specialty is making SECTIONS, and they are the best in the market. Wisconsin BASSWOOD is the right kind for them. We have a full line of BEE-SUPPLIES. Write for free illustrated catalog and price-list.
Marshfield Manufacturing Company, Marshfield, Wis.
A26t Please mention Bee Journal when writing.

was cool and windy nearly the whole month. A good part of the time was cloudy, too. We had a good swarming prospect till after Easter when it turned cold and they did not swarm much. I have had only 4 swarms so far, as I know. It doesn't look like swarming-time at all. Even the Carniolans did not swarm much. We may have a very good flow in a few days, and maybe a few more swarms. Then we will have to wait and hope we will live till next April, and that it will be a good time.

Hale Co., Ala., May 4. J. S. PATTON.

Bees in Best Condition.

My bees are in the very best condition, most of them having two sets of combs. The prospect for a honey crop was never better. White clover is in full bloom, the earliest known here for years. H. C. CLYMER.

Linn Co., Iowa, May 28.

Right Kind of Weather Needed.

The prospect is good for lots of white clover and basswood, if we have the right kind of weather. Clover is just beginning to get out enough for bees to work on, but it has been raining most of the time, and I have to feed to keep the bees from starving and losing their brood. I now have 180 colonies, and 100 pounds of sugar is only about enough for their supper and breakfast.

G. W. WILSON.

Richland Co., Wis., May 29.

Bees Doing Well.

Bees are doing well in this part of the country. The fields are white with clover blossom, and the bees are working on it freely. I have had three swarms this week. The first one is starting in the super. I have the second super on some of my colonies. The honey-locust yielded more nectar this year than I ever noticed before.

P. H. HARBECK.

LaSalle Co., Ill., May 28.

Cool and Backward Spring.

The cool, backward spring has been hard on bees in this locality. The hard freeze of April 29 cut short the supply of nectar from fruit-bloom, and I had to feed some, but at present all are doing nicely. White clover promises a good yield. G. M. WHITFORD.

Washington Co., Nebr., May 19.

Bees Did Poorly this Spring.

Bees are doing poorly this spring. There were only a few days during fruit-bloom when they could work, and most of the hives are entirely bare of stores; I have had to feed the bees to keep them from starving. For the last few days they have been working on white clover, and if we don't get too much rain (it is raining to-day again) the bees may build up yet to gather surplus when sweet clover blooms.

The American Bee Journal is the only paper of those I subscribe for that I read from beginning to end. I always find something new and interesting. ROBT. A HOLEKAMP.

St. Louis Co., Mo , May 17.

Unfinished Sections—Wintered Well.

I have read with interest the pros and cons on different subjects and in regard to unfinished sections. I settled that question for myself some years ago. Every section that does not weigh 10 ounces I uncap and extract in the fall. I then tier up five or six layers of those extracted sections on some of my weakest colonies, and let them clean them out, and they do it all right. I then pile them away so the mice can not get at them in the winter.

When I put on sections I usually put the front row of those old sections, and they are the first filled. I then slip them out and put in 7 new ones. I have no trouble about getting the bees to go into the sections.

The 15th of last November I put 47 colonies of bees into the cellar. I took out 45 alive, and sold two for $10. Three became queenless and dwindled away. I now have 40 good colonies. They are getting some honey from fruit and dandelion bloom. We will soon have white clover. I usually get most of my honey from basswood. I find that the way to get honey is to have lots of bees when the harvest comes, keep them together as much as possible, and decapitate the drones with an uncapping knife. I think that helps to keep down the swarming-fever. I hived one swarm last year. The bees weighed 9 pounds. It came the last of June, and stored 75 pounds in sections, and is strong this spring.

I will report again after harvest.

WM. CLEARY.

Kossuth Co., Iowa, May 17.

Working on White Clover.

Bees are working ou white clover, which is in full bloom—about two weeks earlier than usual. If there is not too much rain the honey crop will be much larger than last year.

The American Bee Journal is a great help to me in caring for my bees.

GEOFFREY A. HUNT.

Tipton Co., Ind., May 26.

Bees in Fine Condition.

My bees are in fine condition. I never saw bees so uniformly strong as mine are this spring. The weather here now is all that could be desired for an abundant harvest of nectar.

A. J. KILGORE.

Wood Co., Ohio, May 25.

Working on Clover.

Well, this spring was a hard one for the bees. Frost killed all of the maple, elm, box-elder and peach bloom, and impaired the apple, cherry, plum, gooseberry and pear bloom. I had to feed the bees to keep them alive. They are doing nicely now. They had a fine time on the raspberry and blackberry, and are now working on white clover, of which there is a profuse bloom. They commenced work on it over a week ago.

D. C. MCLEOD.

Christian Co., Ill., May 28.

Loss in Wintering—Various Matters.

My bees were put into the cellar Dec. 3 in pretty fair shape, but the loss was heavy, owing to not having my cellar completed. Out of 39 colonies I have 15 left, but they are doing well now, storing honey from willow, dandelion and fruit-bloom.

Some of my colonies have five frames of brood, which is good for this part of the country at this time. The colonies which seem strongest are five that have been out since March 9.

I think a cleansing flight does a good deal of good. All the colonies that I gave a flight this spring were quiet when I put them back, while before they were restless.

I notice in the "A B C of Bee-Culture," page 92, dandelion is said to come in bloom just after fruit-bloom. Mr. Doolittle, in his comments, says that in his locality it comes just with fruit-bloom. In our part of the country it comes just before fruit-bloom, and it seems to me it must be of importance in early brood-rearing.

On page 92 (1903), in my report, the types made me say in regard to ginseng, "It will be marketable in from 7 to 10 years for the seed to germinate." It should have been, "It takes 18 months for the seed to germinate."

I like the looks of that money in the treasury of the National Bee-Keepers' Association, and I expect to be a member very soon.

It is only about 15 miles northeast of here where A. I. Root has started his maple-sugar plant, and feeds the "chicks" of the neighborhood on "maple-cream." I hope he will visit my apiary some day this summer, if possible.

I think every bee-keeper should have a bee-paper of some kind. A bee-keeper who does not read the bee-papers is bound to get be(e)-hind the times.

B. L. BYER.

Benzie Co., Mich., May 16.

QUEENS!

Golden and Leather-Colored Italian, warranted to give satisfaction—those are the kind reared by QUIRIN-THE-QUEEN-BREEDER. Our business was established in 1888. Our stock originated from the best and highest-priced long-tongued red clover breeders in the U. S. We rear as many, and perhaps more, queens than any other breeder in the North. Price of queens before July 1st: Large select, $1; six for $5; Tested Stock, $1.50; six for $8; Selected Tested, $2 each; Breeders, $4. Two-frame Nuclei (no queen) $2.50 each.

Special low price on queens in lots of 25 to 100.

All queens are mailed promptly, as we keep 300 to 500 on hand ready to mail.

We guarantee safe delivery to any State, Continental Island, or European Country. Our Circular will interest you; it's free.

Address all orders to

Quirin-the-Queen-Breeder
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(The above ad. will appear twice per month only.) 16E13t

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40-page Catalog Free. Full information regarding Bee-Supplies of all kinds. Best in the market. Latest improvements. Danzenbaker hives kept in stock.

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50 Colonies of Bees FOR SALE

With Extractor and Honey-Tank.

A. BEEKEEPER,

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BINGHAM'S PATENT Smokers

25 years the best. Send for Circular.

25Atf T. F. BINGHAM, Farwell, Mich.

Italian Queens, Bees and Nuclei.

We have a strain of bees bred specially for honey-gathering and longevity, at the following prices:

One Untested Queen	$ .80
One Tested Queen	1.00
One Select Tested Queen	1.25
One Breeder Queen	2.00
One-Comb Nucleus (no Queen)	1.10

Queens sent by return mail. Safe arrival guaranteed. For price on Doz. lots send for catalog.

J. L. STRONG,

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BEE-SUPPLIES!

ROOT'S GOODS AT ROOT'S PRICES.

Everything used by bee-keepers. POUDER'S HONEY-JARS. Prompt service. Low Freight Rates. NEW CATALOG FREE.

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Beedom Boiled Down

The Chicago-Northwestern.

In any business it is a good plan for the different men engaged in it to get together for the purpose of talking over items of especial interest, in order to become better acquainted. This seems to be very true in the bee-business, and can be best carried out, I believe, in a convention where a question-box is the principal program. Each one feels as if he is helping the other, and certainly all feel that they are helped.

Such a convention was the one held at Chicago, in December........I wish simply to say that those who has never attended a convention of this kind do not know what they have missed. There is something to be gained which is not found in bee-books or bee-literature of any kind. Go and find out, and regret only that you never went before.—Editorial in Gleanings in Bee-Culture.

A Kink in Making Wax-Cakes.

A lining of damp paper put inside a vessel into which melted wax is to be poured will prevent the wax from coming in contact with the vessel, hence there will be nc dish to clean up afterwards. Strange as it may seem, the paper will also peel off readily from the cake of wax. Neither will the cake crack while cooling, as it is not stuck fast to the walls of the dish. Mr. H. R. Miller, of Missouri, wrote me about this.—Bee-Keepers' Review.

Postponing Alsike Bloom.

Generally it would be better to have alsike bloom later than its usual time, so as to come when white clover is waning. G. M. Doolittle says in Gleanings in Bee-Culture:

"Alsike clover can be made to bloom very nearly when wanted, within reasonable limits, by turning stock on it, and letting them keep it eaten down short until about two weeks before you wish the bloom to commence, when it will give a good crop of blossoms and a fair crop of hay, though the hay crop will not be quite as large as it would if it could have had its own way."

Four Requisites to Successful Wintering.

Given a box through which no drafts can pass (no upward or lateral ventilation), a plentiful supply of honey to burn, plenty of bees to burn it, plenty of oxygen to burn it with, and you have a formula which spells Success.—A. C. MILLER, in Bee-Keepers' Review.

Best Conditions for Queen-Rearing.

Arhtur C. Miller discusses the matter in the American Bee-Keeper in his usual vigorous style, putting special emphasis upon the matter of humidity, to which probably most of us have never given a thought. It is well known that the right amount of moisture makes all the difference between success and failure in hatching out a clutch of eggs; why should it not make a difference with regard to bees' eggs? Mr. Miller says:

I believe it is generally conceded that the best queens are ordinarily reared at that season of the year when increase (swarming) usually occurs, and certainly they are more easily reared then. There must be a reason for this, and if we can find it, it will materially assist us in so shaping our methods when rearing queens "out of season" as most nearly to approach the normal conditions. At "swarming time" colonies are overflowing with bees; young bees (nurses) are superabundant; combs are loaded with stores of honey and pollen; field-bees are busy bring-

SWEET CLOVER

And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5lb	10lb	25lb	50lb
Sweet Clover (white)	$ .75	$1.40	$3.25	$6 00
Sweet Clover (yellow)	.90	1.70	4.00	7.50
Alsike Clover	1.00	1.80	4.25	8.00
White Clover	1.50	2 80	6.50	12.50
Alfalfa Clover	1 00	1.80	4.25	8.00

Prices subject to market changes.

Single pound 5 cents more than the 5-pound rate, and 10 cents extra for postage and sack.

Add 25 cents to your order, for cartage, if wanted by freight, or 10 cents per pound if wanted by mail.

GEORGE W. YORK & CO.
144 & 146 Erie Street, - CHICAGO, ILL

Bee=Supplies Very best of goods, largest stock in Indiana. Send list of goods wanted AT ONCE and get our

Special Prices.

Catalog free. **C. M. SCOTT & CO.,**
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49A26t **INDIANAPOLIS, IND.**

JUST A LITTLE
more money will buy Page Fence, a fence that fences ALL the stock ALL the time. Catalog free.
PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.

The Danz. Hive—

The Comb Honey Hive.

We sell it. We are authorized jobbing agents for **THE A. I. ROOT CO., for Michigan.** Send us a list of the goods you want for this season, and let us quote you prices. Beeswax wanted. Send for catalog. **H. M. HUNT & SON,**
10A17t **BELL BRANCH, MICH.**

Please mention Bee Journal when writing.

BOYS WE WANT WORKERS Boys, Girls, old and young alike, make money working for us. We furnish capital to start you in business. Send us 10c stamps or silver for full instructions and a line of samples to work with. DRAPER PUBLISHING CO., Chicago, Ill.

Tennessee Queens.

Daughters of Select Imported Italian, Select long-tongued (Moore's), and Select, Straight 5-band Queens. Bred 3¼ miles apart, and mated to select drones. No bees owned within 2⅛ miles: none impure within 3, and but few within 5 miles. No disease. 30 years' experience. WARRANTED QUEENS, 75 cents each; TESTED, $1.50 each. Discount on large orders.

Contracts with dealers a specialty. Discount after July 1st

Send for circular.

JOHN M. DAVIS,
9A26t SPRING HILL, TENN.

To Boston and Return at One Fare

for the round trip from Chicago via Nickel Plate Road, for Christian Scientists' meeting in June. Tickets on sale June 25th, 26th and 27th, with extended return limit of Aug. 1st. Stopover at Niagara Falls, in either direction, without extra charge, and at New York, returning, on payment of fee of $1.00. No excess fare charged on any of our trains. Write John Y. Calahan, General Agent, 113 Adams St., room 298, Chicago, for detailed information. 'Phone Central 2057. 6—22A5t

ing in more, and temperature and humidity are high. These two latter items should receive special attention, and I cannot do better than quote from Cowan's "Honey-Bee." On page 60, quoting Newport, he says: "Temperature of the brood-nest in the swarming season averages 96 degrees, while in August it is seldom over 80 degrees, or perhaps 86 degrees, even in the middle of the day when outer temperature is often more than 78 degrees." He then proceeds to give the scientific reasons therefor. At swarming-time the air of the hive is saturated with moisture, a matter almost never alluded to as a requisite for successful queen-rearing, whereas it is one of the essentials.

It is due to such causes as above that Dr. Gallup's "rousing colonies" produce fine queens, not to any supposed "umbilical cord," the latter being merely the last "cast" of the larva with its silken attachments.

Quality of Catnip Honey.

Last year, for the first time, J. A. Crane had some catnip honey. He says in Gleanings in Bee Culture:

> It being a very wet season, the stuff grew quite rank, and farmers were too busy, when it did not rain, to cut it; consequently the bees made a drive on it, wet or dry, rain or shine. Wherever there was a bunch of catnip it would be covered with bees from morning till night. Well, just before buckwheat came I extracted the crop, and—whew! I have it yet. I don't want any more. I can't sell it, can't eat it, wouldn't give it away—going to make bees of it. If all catnip is like this, every pound of it sold on the market will spoil the sale of five pounds of good honey.

Editor Root adds:

> I tasted the honey at Dr. Grandy's that had a slight flavor of catnip. It was not unpleasant. But a pure-catnip honey might be very strong, and totally unfit for market. I think we have had other reports to that effect. In the same way, hoarhound honey—the pure article—is vile stuff. But a very little of it mixed with some other good grade of honey gives it a nice flavor that is not unlike the hoarhound candy of our childhood days.

The Carniolan=Italian Cross.

L. H. Perry says in the American Bee-keeper:

> I have crossed them for several years, and with me the cross is a better bee than either race in its purity. The most satisfactory results have been from the use of a Carniolan queen—the drone being Italian. In most cases this gives me a bee that sticks right to business in a honey-flow, and also a prolific queen. They are trying constantly to swarm, and are quite as gentle as either of the races from which the cross originates, and are beautiful bees, as well.
>
> I have kept Carniolans for many years, and with the exception of their two bad traits—excessive swarming and excessive brood-rearing after the close of the honey-flow—I find them superior to the Italians in every way. The use of the Carniolan queen with Italian drone, has given me the bee best suited to myself, and I have no doubt the experience of my brother bee-keepers would be the same. The colonies which gave me the most honey this year were all bred in this way, and I am well pleased with their actions. Best of all, they did not offer to swarm, but kept right at work, storing honey. It is my firm belief that the more Carniolan blood one can get

Business Queens,

Bred from best Italian honey-gathering stock, and reared in **FULL COLONIES** by best known methods. Guaranteed to be good Queens and free from disease. Untested, 75c each; 6, $4.00. Tested, $1.25 each. Untested ready July 1st. Tested about July 15th. Address,

CHAS. B. ALLEN,
18Atf Central Square, Oswego Co , N. Y.

Please mention Bee Journal when writing.

Italian Queens, by Mail.

Golden and Honey Queens before July 1

	1	6	12
Untested	$1.00	$ 5.00	$ 9.00
Tested	1.25	7.00	13.00
Breeder	4 00		
2-frame Nucleus (no queen)	2.00	11.00	21.00

Add price of any Queen wanted with Nucleus.
Our bees are shipped in light shipping-cases.
Purchaser pays express on Nuclei.
Safe arrival guaranteed of all stock sent out.

BATAVIA, ILL., Aug. 21, 1901.

Dear Sir:—I thought I would let you know as to results of the nucleus sent me. They were placed in 10-frame hives and now they are in fine condition. From one I removed 24 pounds of honey and had to give 6 of them more room, as they were hanging out. They have more than reached my expectations.

Yours respectfully, E. K. MEREDITH.

DAVENPORT, IOWA, Dec. 31, 1901.

Your queens are fully up to standard. The honey queen that you sent my brother takes the lead. She had a rousing colony when put up for winter. The goldens can be handled without smoke or veil. Very truly yours,

JOHN THOEMING.

Notice. — No tested stock sent out before May 15. Send money by P. O. Money Order or Express Order. **D. J. BLOCHER,**
17Atf PEARL CITY, ILL.

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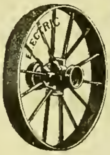

A Good Wagon begins with good wheels. Unless the wheels are good the wagon is a failure. IF YOU BUY THE **ELECTRIC STEEL WHEEL** made to fit any wagon—your wagon will always have good wheels. Can't dry out or rot. No loose tires. Any height, any width tire. Catalog free.

ELECTRIC WHEEL CO.
Box 16 QUINCY, ILL.

Catnip Seed Free!

We have some of the seed of that famous honey-producing plant—Catnip. It should be scattered in all waste-places for the bees. Price, postpaid, 15 cents per ounce; or 2 ounces mailed **FREE** to a regular subscriber for sending us one **NEW** subscriber to the Bee Journal for one year, with $1.00; or for $1.20 we will send the Bee Journal one year and 2 ounces of Catnip seed to any one.

GEORGE W. YORK & CO.
144 & 146 E. Erie St., - CHICAGO, ILL.

65 Best Queen of Sixty-five 65

BELLE PLAINE, MINN, April, 1903.

MR. ALLEY:—I have a queen received from you in 1900. Her bees are the best honey-gatherers of an apiary of 65 colonies in which are queens from different breeders—natural queens—as Dr. Gallup calls them. The Adel queen is the best of the lot. C. J. OLDENBERG.

A Tested Adel Breeding Queen and my new book giving result of 40 years' experience in rearing queens, sent by mail for $2.00. Warranted Adel queens, each, $1.00. Safe arrival guaranteed. Send for price list of queens and prospectus of book.

20Atf **HENRY ALLEY, WENHAM, MASS.**

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SHEEP MONEY IS GOOD MONEY and easy to make if you work for us. We will start you in business and furnish the capital. Work light and easy. Send 10 cents for full line of samples and particulars.
DRAPER PUBLISHING CO., Chicago, Ills.

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FREE FOR A MONTH....

If you are interested in Sheep in any way you cannot afford to be without the best Sheep Paper published in the United States.

Wool Markets and Sheep

has a hobby which is the sheep-breeder and his industry, first, foremost and all the time. Are you interested? Write to-day.

WOOL MARKETS AND SHEEP, CHICAGO ILL.

Please mention Bee Journal when writing

into them, without retaining the disposition for excessive late breeding, the better bee he will have. I have the "red clover" strains of Italians, but they do not work as well on red clover as my Carniolans do. Though I have never measured their tongues I believe they can reach farther than Italians.

It should not be understood that all crosses of this kind are as satisfactory as those mentioned above, for about 33 percent proved to be determined swarmers.

Weed Foundation Not Inferior.

I regret that, in the report of the Ontario Bee-Keepers' Association convention, page 37, of the American Bee Journal, through some one's slip, a decidedly wrong impression is given of what was said by me about the Weed foundation. I distinctly said that I had not found other section foundation more acceptable to the bees. In fact, so far the contrary is my experience, and I hope no one will use that incorrect statement as evidence of the superiority of other makes.

The Weed foundation has, for brood or sections, the advantage over any other I have so far used, of staying better where it is at the beginning; less sagging, or none at all. It is stronger; less weight per sheet in the brood will answer—a great saving.—R. F. HOLTERMANN, in Gleanings in Bee-Culture.

Close Saturdays at 1 p.m.—Our customers and friends will kindly remember that beginning with July 1, for three months we will close our office and bee-supply store at 1 p.m. on Saturdays. This is our usual custom. Nearly all other firms here begin the Saturday afternoon closing with May 1st, but we keep open two months later on account of the local bee-keepers who find it more convenient to call Saturday afternoons for bee-supplies.

Good Buggies Cheap for 30 Days.—For one month from the date of this issue the Kalamazoo Carriage and Harness Mfg. Co., 161 Ransome St., Kalamazoo, Mich., are offering a regular $80 buggy for $45, and extending the privilege to the purchaser of trying it for 30 days, and then returning it if for any reason it is not satisfactory.

They do not limit the number of buggies to be sold at this price, but the time limit is inexorable, the $45 price expiring in 30 days from this date.

The Kalamazoo concern is the pioneer in selling buggies direct to the people on 30 days free trial plan, and have made a wonderful success of this method because of its liberality and fairness and because of the high quality, low price and good value of their goods.

They are the largest manufacturers of buggies and harness in the world who sell their output direct to the users and save the middlemen's profits. Their buggy book, with all the favorites and all the newest patterns and styles of vehicles will be sent the reader on request. Please mention the American Bee Journal when writing.

The AMERICAN INSTITUTE of PHRENOLOGY
Incorporated 1866. 39th Session opens Sept. 2d. Subjects: Phrenology, the Art of Character Reading; Anatomy, Physiology, Physiognomy, Heredity, Hygiene, etc. Address: 24 E. 22d St., New York, care of FOWLER & WELLS CO.
Please mention Bee Journal when writing.

California! If you care to know of its Fruits, Flowers, Climate or Resources, send for a sample copy of California's Favorite Paper—

The Pacific Rural Press,

The leading Horticultural and Agricultural paper of the Pacific Coast. Published weekly, handsomely illustrated, $2.00 per annum. Sample copy free.

PACIFIC RURAL PRESS,
330 Market Street, - SAN FRANCISCO, CAL.
Please mention Bee Journal when writing

Please Mention Bee Journal when writing advertisers.

CONVENTION NOTICE.

Texas.—The Texas Bee-Keepers' Association meets in annual convention at the Agricultural and Mechanical College, at College Station, Texas, July 7 to 10, inclusive, during the Texas Farmers' Congress meetings. Cheap excursion rates. Large crowds. A good time. Learn a heap. Meet your fellow-men, and talk. Exhibits of all kinds of stuff. Premiums of all kinds awarded. Come, and bring what you have, and take home some of the premiums. You are invited. Be sure to be there. July 7 to 10, 1903, at the A. & M. C. of Texas, College Station.
Hunter, Texas. LOUIS H. SCHOLL, Sec.

$5 TO START YOU IN BUSINESS
We will present you with the first $5 you take in to start you in a good paying business. Send 10 cents for full line of samples and directions how to begin.
DRAPER PUBLISHING CO., Chicago, Ills.

(Paid Advertisement, inserted by order of G. F. Davidson, Fairview, Texas.)

Know all men by these Presents that, we, the undersigned, have this day entered into the following contract, to-wit:

The Jennie Atchley Co., of the first part, agrees to sell all their right and title to the Southland Queen, also the entire subscription list and all accounts due to said paper for the consideration of $400, to us in hand paid by G. F. Davidson, Louis Scholl and F. M. Jones, a company formed by the last-named parties, known as the Lone Star Apiarist Pub. Co. Said $400.00 payment to be in the form of a gilt-edged note signed by G. F. Davidson, Frank M. Jones and Louis Scholl, with G. R. Tullos and W. O. Murray as sureties. This note is to be perfectly good on which, cash can be obtained at any time by the holders thereof, and bearing date Dec. 28, 1901; due on or before Dec. 28, 1902, with 10 percent interest until paid, and 10 percent additional on principal and interest for attorney's fees in case of suit having to be brought to force payment of said note. **The said Jennie Atchley Co. agree not to start a bee-paper for the term of five years.** It is understood by all concerned that the said Jennie Atchley Co. get the use of the back cover leaf—two pages—for the year 1902 for the purpose of running their own advertising and that of the A. I. Root Co., of Medina, Ohio. The advertising to be in the new bee-paper, The Lone Star Apiarist.

The Jennie Atchley Co.
Signed.... By E. Atchley, Sec.
The Lone Star Apiarist Pub. Co.
By G. F. Davidson, Pres.
Witnesses....
John Miller,
The Hyde Bee Co.,
By O. P. Hyde, Pres.

$19.00 from Chicago to Boston and Return $19.00

via Nickel Plate Road, occount meeting of Christian Scientists, June 28th to July 1st. Tickets on sale June 25, 26 and 27, with open return limit of June 28. By depositing tickets with Joint Agent in Boston on July 1, 2, 3 or 4, and payment of fee of 50c., extended limit returning until Aug. 1st may be obtained. Stop-over at Niagara Falls, in either direction, without extra charge. No excess fare charged on any of our trains. Three trains daily. Through vestibuled sleeping-cars. American Club Meals served in dining-cars on Nickel Plate Road; also meals a la carte. Address John Y. Calahan, General Agent, 113 Adams St., room 298, Chicago, for reservation of sleeping-car space and other information. 'Phone Central 2057. 8—22A5t

HONEY AND BEESWAX

MARKET QUOTATIONS

CHICAGO, June 5.—The market is lifeless, no movement except extracted at low prices. Best grades of white extracted, 5½@6 cents; amber, 5@5½c. Comb honey is held at 15c for choice white, and anything not grading up to meet this requirement sold at 2@5c less per pound. Beeswax, 32c. R. A. BURNETT & CO.

KANSAS CITY, May 28.—The supply of comb honey is about exhausted. The demand good. We quote you as follows: Fancy white comb, 24 sections, per case, $3 50; No. 1 white comb, 24 sections, $3 40; No. 2, white and amber, per case, $3.00@3.25. Extracted, white, per pound, 6@6½c; amber, 5½c. Beeswax, 25@30c.
C. C. CLEMONS & CO.

ALBANY, N. Y., Mar. 14. — Honey demand quiet; receipts and stock light. Comb selling, light, 15c; mixed, 14@15c; dark, 13@14c. Extracted, dark, at 7@7½c. Beeswax firm, 30@32c.
H. R. WRIGHT.

CINCINNATI, June 1.—Very little change in market from last report. We quote amber extracted grades at 5½@6½c in barrels; white clover, 8@9c; supply equal to demand. Comb honey, 15@16c for fancy. Beeswax, 30c.
THE FRED W. MUTH CO

NEW YORK, May 21.—Comb honey trade exceptionally quiet, very little doing. Fancy stock not plentiful and is sold at 14c. A large supply of other grades on hand, which we are quoting at from 11@13c, according to quality, and in large lots make concessions from these prices. Extracted, unusually quiet, and prices show a downward tendency all along the line. Beeswax, firm at from 30@31c.
HILDRETH & SEGELKEN.

CINCINNATI, May 19.—The demand for comb honey is nearly over, but as the stock is almost exhausted, prices keep up. The demand for extracted has not changed whatever, and prices are as follows: Amber in barrels, 5¼@5½c; in cans, 6@6½c; white clover, 8@8½c. Beeswax, 28@30c. C. H. W. WEBER.

SAN FRANCISCO, Apr. 29.—White comb honey, 12@12½c; amber, 9@10c; dark, 7@7½c. Extracted, white, 6½@7c; light amber, 5½@6c; amber, 5@5¼c; dark, 4@4¼c. Beeswax, good to choice, light 27@29c; dark, 25@26c.

Last year's product has been tolerably well cleaned up, particularly the desirable stock. Present offerings are largely odds and ends, including little of fine quality. Values for the time being are little more than nominal. A lower range of prices is looked for on coming crop.

WANTED WHITE CLOVER EXTRACTED HONEY!
Send sample and best price delivered here; also Fancy Comb wanted in no-drip cases.
THE FRED W. MUTH CO.
32Atf Front and Walnut, CINCINNATI, OHIO.
Please mention Bee Journal when writing.

WANTED!
CALIFORNIA COMB HONEY in car-lots. It will pay you to correspond with us.
THOS. C. STANLEY & SON,
24Atf MANZANOLA, COLO., or FAIRFIELD, ILL.
Please mention Bee Journal when writing

WANTED—Extracted Honey.
Mail sample and state lowest price delivered Cincinnati. Will buy FANCY WHITE COMB HONEY, any quantity, but must be put up in no-drip shipping-cases.
C. H. W. WEBER,
2146-48 Central Ave., CINCINNATI, OHIO.
24Atf Please mention the Bee Journal.

If you want the Bee-Book
That covers the whole Apicultural Field more completely than any other published, send $1.20 to
Prof. A. J. Cook, Claremont, Cal.,
—FOR HIS—
"Bee-Keeper's Guide."
Liberal Discounts to the Trade.
Please mention Bee Journal when writing

The Best Bee-Goods in the World....

are no better than those we make, and the chances are that they are not so good. If you buy of us **you will not be disappointed. We are undersold by no one.** Send for new catalog and price-list and free copy of THE AMERICAN BEE-KEEPER; in its thirteenth year; 50 cents a year; especially for beginners.

——THE——

W. T. Falconer Mfg. Co.,
JAMESTOWN, N. Y.

W. M. Gerrish, Epping, N.H., carries a full line of our goods at catalog prices. Order of him and save the freight.

Please mention Bee Journal when writing.

A Few Cheap Smokers!

We find we have on hand a few slightly damaged Clark and Bingham Bee-Smokers, which got a little damp and soiled at the time of the fire in the building where we were about 2 years ago. They are all almost as good as new.

We have some of the Clark Cold Blast, which when new sell now at 55 cents each; and some of the Little Wonder Bingham—new at 50 cents. But to close out those we have left that are slightly damaged, we will fill orders as long as they last at these prices:

Clark at 25 cents each; Little Wonder Bingham at 30 cents each.

We do not mail any of these slightly damaged Smokers, but will put them in with other goods when ordered, or sell them here at our office when called for—at the above prices.

GEORGE W. YORK & CO.,
144 & 146 E. Erie Street, - CHICAGO, ILL.

Bee-Keepers, Remember

that the freight rates from Toledo are the lowest of any city in the U.S. We sell

Root's Supplies at their Factory Prices * * * * *

Poultry Supplies and Hardware Implements a specialty. Send for our free Illustrated Catalog. Honey and Beeswax wanted.

GRIGGS BROS.,
214 Jackson Avenue,
TOLEDO, OHIO.

14A13t Please mention the Bee Journal.

$300,000,000.00 A YEAR and you may have part of it if you work for us. Uncle Sam's poultry product pays that sum. Send 10c for samples and particulars. We furnish capital to start you in business. **Draper Publishing Co., Chicago, Ill.**

Special Notice to Bee-Keepers!

BOSTON

Money in Bees for You.
Catalog Price on

ROOT'S SUPPLIES

Catalog for the Asking.

F. H. FARMER,
182 Friend Street, Boston, Mass.
Up First Flight.

16A13t Please mention the Bee Journal.

26th Year **Dadant's Foundation** 26th Year

We guarantee Satisfaction. What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS. PATENT WEED-PROCESS SHEETING.

Why does it sell so well? Because it has always given better satisfaction than any other. Because in 25 years there have not been any complaints, but thousands of compliments.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

Bee-Keepers' Supplies OF ALL KINDS * * * * *

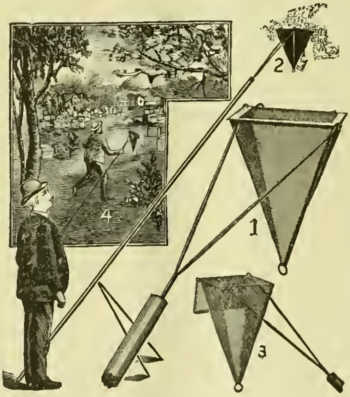
Very fine pure-bred BARRED PLYMOUTH ROCK Chickens and Eggs for sale at very low prices.

Langstroth on the Honey-Bee—Revised,
The classic in Bee-Culture—Price, $1.20, by mail.

BEESWAX WANTED at all times.

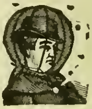
DADANT & SON,
Hamilton, Hancock Co., Ill

Swarming Season.



Save your prime swarms. They are worth many times the value of secondary swarms that issue during the middle or late summer. The Manum Swarm Catcher, as shown in the illustration, is the best for this purpose. The basket is of wire-cloth with lid, and hung so that it can not be upset while suspended in air No climbing trees to cut off limbs, torn clothing, sprained wrists, etc. Shipping weight, 10 pounds. Price, $1.10.

The Alley Queen and Drone-Trap will cage your queens at swarming-time, when you have difficulty in locating them, or where you have occasion to be absent during swarming season. They are indispensable to the queen-breeder for caging drones to be taken to another yard, or for disposing of undesirable drones. Made in 12 and 14 inch length. Price, by mail, 65 cents each; by freight or express, 50 cents each; ten, $4.00.



A Good Veil is a necessity even with the most gentle bees. The apiarist can accomplish more work; there is no hesitancy on his part because of cross bees. Price, $1.00, postpaid. We have others at 80, 50 and 40 cents, postpaid.

The clipping of queen's wings is another method for securing the prime swarms. For the purpose we have a small pair of scissors which we supply at 25 cents, postpaid. See modus operandi in May 15th Gleanings in Bee-Culture.

The A. I. Root Co., Medina, Ohio,
U. S. A.

GEORGE W. YORK & CO. 144 & 146 Erie Street, CHICAGO ILL., are headquarters for ROOT'S BEE-KEEPERS' SUPPLIES IN CHICAGO. Send to them for their free Catalog.

Nat'l Bee-Keepers' Convention at Los Angeles, Aug. 18-20

AMERICAN BEE JOURNAL

43d Year. CHICAGO, ILL., JUNE 18, 1903. No. 25.

Along the Santa Fe Route to Los Angeles

Life in Moki Land, Arizona

MOKI FAMILY, SHIPAULOVI.

CHANTING BEFORE KISI, WOLPI.

CORN-CARRIER.

SNAKES IN KIVA.

THE AMERICAN BEE JOURNAL

PUBLISHED WEEKLY BY
GEORGE W. YORK & COMPANY
144 & 146 E. Erie St., Chicago, Ill.

Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

EDITOR,
GEORGE W. YORK.

DEPT. EDITORS,
DR. C. C. MILLER, E. E. HASTY, EMMA M. WILSON

IMPORTANT NOTICES.

The Subscription Price of this Journal is $1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

The Wrapper-Label Date of this paper indicates the end of the month to which your subscription is paid. For instance, "dec03" on your label shows that it is paid to the end of December, 1903.

Subscription Receipts.—We do not send a receipt for money sent us to pay subscription, but change the date on your wrapper-label, which shows you that the money has been received and credited.

Advertising Rates will be given upon application.

National Bee-Keepers' Association

Objects of the Association:

1st.—To promote the interests of its members.
2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

ANNUAL MEMBERSHIP, $1.00.
Send dues to Treasurer.

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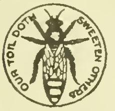
A Celluloid Queen-Button is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-lapel. It often serves to introduce the subject of honey, and frequently leads to a sale.


OUR TOIL DOTH SWEETEN OTHERS

The picture shown herewith is a reproduction of a motto queen-button that we are furnishing to bee-keepers. It has a pin on the underside to fasten it. Price, by mail, 6 cents; two for 10c; or 6 for 25 cents. Send all orders to the office of the American Bee Journal.

Dr. Miller's New Book

SENT BY RETURN MAIL.

The book contains 328 pages, is bound in handsome cloth, with gold letters and design; it is printed on best book-paper, and illustrated with over 100 beautiful original half-tone pictures, taken by Dr. Miller himself. It is unique in this regard.

The first few pages of the new book are devoted to an interesting biographical sketch of Dr. Miller, telling how he happened to get into bee-keeping. Seventeen years ago he wrote a small book, called "A Year Among the Bees," but that little work has been out of print for a number of years. While some of the matter used in the former book is found in the new one, it all reads like a good new story of successful bee-keeping by one of the masters, and shows in minutest detail just how Dr. Miller does things with bees.

HOW TO GET A COPY OF DR. MILLER'S "FORTY YEARS AMONG THE BEES."

The price of this new book is $1.00, post-paid; or, if taken with the WEEKLY **American Bee Journal** for one year, BOTH will be sent for $1.75.

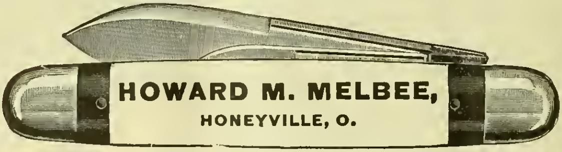
Or, any present regular subscriber to the American Bee Journal whose subscription is paid in advance, can have a copy of Dr. Miller's new book *free as a premium* for sending us **Two New Subscribers** to the Bee Journal for one year with $2.00. This is a magnificent offer, and should be taken advantage of at once. For many of our readers it is not only an easy way to earn a copy of the book, but at the same time they will be helping to extend the subscription list of the old American Bee Journal, and thus aiding also in spreading the best kind of apicultural information among those who would be successful bee-keepers.

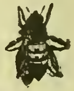
Address all orders to
GEORGE W. YORK & CO.,
144 & 146 E. Erie Street, CHICAGO, ILL.

Please Mention the Bee Journal when writing Advertisers *****

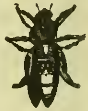
The Novelty Pocket-Knife.

Your Name and Address on one side—Three Bees on the other side.





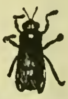
[THIS CUT IS THE FULL SIZE OF THE KNIFE.]



Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the subscriber, and on the other side pictures of a Queen, Drone, and Worker, as shown here.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a last-time, with proper usage.



Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the "Novelty" is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the "Novelties," your POCKET-KNIFE will serve as an identifier; and in case of death, your relatives will at once be notified of the accident.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid for $1.25, or give it as a Premium to the one sending us THREE NEW SUBSCRIBERS to the Bee Journal (with $3.00.) We will club the Novelty Knife and the Bee Journal for one year, both for $1.90.

GEORGE W. YORK & CO. Chicago, Ill.

☞ Please allow about two weeks for your knife order to be filled.

AMERICAN BEE JOURNAL
Established in 1861
The Oldest Bee-Paper in America

43d YEAR. CHICAGO, ILL., JUNE 18, 1903. No. 25.

Editorial Comments

Writing Up Honey in the Local Papers is strongly urged by Wm. M. Whitney. He says in Gleanings in Bee-Culture:

> Now, it seems to me that the surest and best way to create a demand for honey, and thus enhance the price, would be to get the local press interested; *i. e.*, publish through the local papers instruction or information regarding the uses and benefits of honey as a food, a medicine, etc. It is surprising how little is known by the majority of people, even in the country, of the value of honey in numberless ways in a family. If we who are interested in this matter (and all bee-keepers ought to be) would thus place before the people in a judicious manner the ways in which honey may be used to great advantage, many families that have considered it a luxury in which they could not indulge might be induced to try it.
>
> For instance, here is a family fond of warm biscuit and honey, or pancakes and honey, but think they can not afford it, but would adopt it if they were told that a syrup of granulated sugar, costing about 3 cents per pound, mixed with good, thick, extracted honey, costing in bulk, say 12 cents per pound, made a very fine syrup for the purpose, with all the flavor of honey, and making the average cost only about 7 cents per pound. How much better this would be for the consumer than to buy the stuff put on the market by the trade generally, with nobody responsible for its manufacture, and composed principally of glucose or something worse! When mixed at home we know what we are using.
>
> The above is simply an illustration of what might be done were we to turn our attention in the direction of the local papers. We may talk till doomsday through the bee-journals, that nobody sees but the bee-keepers (and but few of them, I'm sorry to say), and it will never create a demand for honey one iota. What would we think of the business sense of a manufacturing establishment that exploited its goods and wares through the medium of a publication that fell into the hands of its competitors only? That is substantially what bee-keepers are doing in their efforts to market their honey. They talk in the bee-journals; they talk in conventions, where there is no one to hear but themselves. Why, it almost seems like lying awake at night to talk to one's self.

Mr. Whitney, in the above, gives some very good suggestions about creating a larger demand for honey. We hardly favor, however, the idea of suggesting to consumers that they could mix granulated sugar syrup with honey. We do not see the necessity of it. Why not eat the pure honey alone, instead of adulterating it with sugar? Certainly, extracted honey is cheap enough now without mixing it with a cheaper article in order to dispose of more honey. We think that greater headway will be secured by urging people to use more honey alone. They will do this as they become better acquainted with its value as an article of food. If bee-keepers were producing sugar also in connection with keeping bees, it might do for them to urge the use of sugar. We really think that it is better for bee-keepers simply to urge a wider consumption of honey, and if people wish to use sugar let them do so without any suggestion on the part of bee-keepers.

Mr. Whitney certainly is correct in saying that it is poor policy for bee-kepers to try to increase the consumption of honey by writing about it in the bee-papers. But that is all right so far as it goes, as it helps the producers, in that it educates them on the use of honey, when they can in turn pass the information on to their neighbors and friends. Perhaps a good way would be to pay the publishers of local newspapers for a certain amount of space, and then use it in calling the attention of people generally to the value of honey as a food. It can hardly be expected that the local newspapers are going to use a lot of their space for the benefit of bee-keepers who have honey for sale. It is not just to ask them to use their valuable space in that way, without offering to pay them something for it.

We have thought for some time that the National Association could not better invest a few dollars than in advertising in the leading daily papers of this country. Something like the National Biscuit Co. does with their Uneeda Biscuit and other bakery goods that they turn out. It might be well for the bee-keepers to create an advertising fund, letting each one contribute something toward it, as such advertising would be for the benefit of all who produce honey. A National honey exchange could do something of this kind very profitably, we think, as it would create a demand for their honey, especially if they sold it under a certain brand or label.

Honey will not sell itself, any more than anything else. Everything these days has to be pushed, and pushed vigorously, in order to receive the attention of the masses. Witness the advertising of the various breakfast foods. One can scarcely pick up a newspaper or magazine of any kind that does not contain a number of breakfast-food advertisements. The persistency with which the manufacturers of these brands of food continue their advertising, shows that it must pay to do so. Nearly everybody eats some kind of breakfast food. Nearly everybody should also eat honey, and we believe they will do so if they ever have an opportunity to learn as much about honey as they now know about breakfast foods.

Honey has never been brought to the attention of the consuming public in a manner to recommend it for general use. Perhaps one reason is that it can not be produced in unlimited quantities, as can be done with breakfast goods and other food preparations that are manufactured. When the honey of the country is all cleaned up, there will not be any more until the next season, and when the crop is short the end is soon reached. A National honey exchange, with ample funds, could buy up a large quantity of honey and store it, so that it likely would be able to supply all its demands from year to year. And yet, we have always contended that there is not enough honey produced in the whole country to supply the demand that would arise if everybody was as familiar as they should be with honey as a daily table article.

We think this is a subject worthy the best thought of honey-producers everywhere. With the proper demand among the people for pure honey, we believe that the price would be much higher for all grades. Most people like to eat good things, and if they can be assured of purity at all times, they are willing to pay a good price.

A Plan for Rearing Queens and Starting Nuclei.—Nuclei may be started in different ways. A plan of getting nuclei started that is easy of accomplishment for the beginner, at the same time resulting in a laying young queen in each nucleus, is as follows:

Take from a strong colony of choice stock its queen and two frames of brood with adhering bees, putting them in another hive on a new stand. In place of the removed frames two empty combs may be given. The hive in which the queen has been put may also be filled up with empty combs, or with frames filled with foundation.

Nine days later take the old colony from its stand, and put in its place the hive with the queen. The field-bees, when they return from foraging, will join the latter, and it will soon be a good colony.

The contents of the old hive may now be divided up into nuclei. The bees being queenless, they will stay wherever put much better than will bees taken directly from a colony with a laying queen. Two frames of brood with adhering bees will do 'for each nucleus, and it will be well to add a frame of honey to each. One of the nuclei should be placed on the stand which the queen occupied for nine days, and this need hardly be so strong as the others, for it will have the advantage of the field-bees that had been with the old queen.

The result may be unsatisfactory if no attention is paid to the position of the queen-cells. They will be mostly found on the edges of the combs, where they may be easily chilled in the nuclei. Cut out those that are not centrally located, and see that each nucleus has two or more cells fastened upon the combs where they will be sure to be kept warm.

Not all the cells will be good; for the bees have a habit of starting the last cells after the brood has become too cold; but if they have two or more to choose from they will choose the best.

To Fasten Queen-Cells on Combs.—One way is to cut a hole in the comb and fit the cell into it. Another way is to use a heavy pin or a light 1½-inch wire-nail, thrusting the pin or nail through the bit of comb at the base of the cell, and nailing the cell to the comb. Perhaps a still better way is to use a staple such as is now used in fastening bottom-boards to hives (1½ inches wide with legs ¾ inch long), pressing one end into the comb and letting the other compass the cell. Of course, care must be taken that the cell is not crushed, and that its cavity is not thrust into.

Association Notes

COLLECTING HONEY-DEBTS.—A member of the National Bee-Keepers' Association could not collect a long-standing honey-debt. At the request of the General Manager, he wrote and requested the person owing to settle, or it would be placed in the hands of the General Manager for collection. The money came at once. This is one of the ways in which the Association helps its members. Who would not join such an organization, when $1.00 as membership dues will bring so much in return?

ANOTHER THREATENED LAWSUIT PREVENTED.—The following letter was sent by General Manager France:

MR. LEON KELLOOG, Village Clerk, Sparta, Mich.—

Dear Sir:—I received your letter April 28, stating the village of Sparta, Mich., had passed an ordinance relative to the keeping of bees in Sparta, etc. Soon after, 1 sent the President of the National Bee-Keepers' Association to investigate the case, which he did, and reported there was something back of the bees, etc. That at that time compromise would not satisfy those in authority, and that we should be prepared to defend our member if necessary. Whereupon we secured the best legal assistance. We have over $1000 in our treasury, and with over 1200 members ready to furnish their dollars if necessary, we are prepared to defend a legal business in your village.

To-day I got a short letter, stating said village, after carefully investigating the case, has concluded to drop it. No city or village in America has in force any such ordinance.

In behalf of the National Bee-Keepers' Association, I want to thank the village officers of Sparta, Mich., for their consideration of this matter, and decision of indefinite postponement of the ordinance, declaring a nuisance and ordering removed from their jurisdiction an honorable and legal occupation.

All is well that ends well. I hope that harmony and good-will may prevail in your village evermore.

Yours truly, N. E. FRANCE,
General Manager of National Bee-Keepers' Association.
Platteville, Wis., May 23, 1903.

THE SANTA FE ROUTE TO LOS ANGELES is the one over which likely most of the bee-keepers will go who live east of Chicago. Of course, all who live along this route will also go by that road. In the advertisement of the Santa Fe in this issue are described two trips, one of which provides for a stop-over at the Grand Canyon in Colorado, while the other goes right through to Los Angeles without any extra stop-overs. Some of us have about decided to take the trip that has a stop-over at the Grand Canyon, and rest there over Sunday, arriving there Saturday evening and leaving Monday morning. It is a long journey from the East, or even from Chicago, to Los Angeles, so that a day's rest, especially on Sunday, would doubtless be much appreciated. By leaving Chicago Wednesday evening, at 10 o'clock, we can stop at the Grand Canyon and still arrive in Los Angeles a full half day ahead of the first session of the convention, which meets on Tuesday evening, August 18. If we can get together a company of 18 to start from Chicago at the same time, we can have a tourist car to ourselves, which will not only take us to the Grand Canyon, but after visiting that wonderful place we can continue the journey in the same car. This, it seems to us, would be very desirable. We will be glad to make all necessary arrangements here in Chicago for any who wish to join the company starting from here on Wednesday evening, August 12.

Those who are unable to spend quite as much time on the way can leave Chicago on Friday evening and still get to the convention on time on Tuesday. But as this trip to Los Angeles may be the one of a life time, it seems to us that we all can arrange to spend two days more, and leave Chicago on Wednesday evening, August 12.

We will be glad to announce in the Bee Journal the names of all who expect to go to the convention, if they will let us know. It is just two months until the great meeting will be held in Los Angeles. This will be ample time for all who can go, to make every necessary arrangement for the trip.

Miscellaneous Items

HOMER H. HYDE, of Wilson Co., Tex., is to be married to-day (June 18). The name of the young lady is Lizzie E. Adams. We wish them not only lots of "chunk-honey," but also big "chunks" of happiness all the way through life.

W. Z. HUTCHINSON has contributed to the June issue of "Country Life in America," an illustrated article ou bee-keeping for pleasure and profit. This magazine is perhaps the most elegantly illustrated of any publication devoted to rural life issued in this or any other country. It is beautiful all the way through. It is a monthly publication, and contains about 50 pages 10¼x14¼ inches in size. Doubleday, Page & Co., of New York, N. Y., are its publishers. Twenty-five cents will secure a copy of the June issue referred to.

THE BEE-KEEPERS' LAW for Illinois does not go into effect until July 1. Those who have the matter in charge are casting about for a suitable bee-keeper for inspector of apiaries. As soon as he is selected and appointed we will announce it. As all know who have read the law, which we published on page 308, the Illinois State Bee-Keepers' Association is expected to do all the correspondence and be to the trouble of settling all the bills, etc., and yet gets nothing for it. It seems to us that the bee-keepers of this State can not help in any way more than to become members of the State Association. Illinois should have the largest State Bee-Keepers' Association of all. We believe now that it is about the smallest of any of the States that have bee-keepers' associations at all. Why not send your dues of $1.00 at once to the Secretary, Jas. A. Stone, Route 4, Springfield, Ill.?

MR. LOUIS H. SCHOLL succeeds Mr. Wilmon Newell as Assistant State Entomologist, and in charge of the Experimental Apiary at the A. & M. College, at College Station, Tex., who resigned to accept the position of Assistant State Entomologist of Georgia. Mr. Newell is well known to Texas bee-keepers for the good work he has done in establishing the apiary at the A. & M. College, and advancing the industry of bee-keeping throughout the State, to which industry his departure will be a distinct loss. Mr. Newell will have charge of orchard and nursery inspection work in Georgia, for which his previous experience in Ohio and Iowa well fits him, and he leaves the college with the best wishes of his many friends in Texas. We are glad to know that his position has been so well filled by the appointment of Mr. Louis H. Scholl, of Comal Co., Tex., Secretary of the Texas State Bee-Keepers' Association. He is a native of Comal County, and is known throughout Texas and nationally as an expert bee-keeper. Mr. Scholl will devote his time entirely to the experimental apiary, and building up bee-culture in Texas. We wish him every success in his new position.

Convention Proceedings

Chicago-Northwestern Convention.

Report of the Chicago-Northwestern Bee-Keepers' Convention, held in Chicago, Dec. 3 and 4, 1902.

BY OUR OWN SHORTHAND REPORTER.

(Continued from page 374.)

Pres. York—For the benefit of those who just came in, I would say that we are discussing "Commercial Organization Among Bee-Keepers."

Mr. Moore—I think a whole lot of this material that we are going over, perhaps laboriously, is useless. Don't take what I say to heart. All these things will settle themselves. In case any disputes arise you can agree to have an arbitration. The thing to do is to get the 700,000 bee-keepers in the United States to know that they want anything. We have a thousand in the National, pretty near, and as I read over what Dr. Mason said, I find that even the Greater New York had only 150 at the outside, and this number inside and and outside is more than in any other association in this country. Out of the total number there are only 2000 of them who know or realize that they need anything on that subject. It is the capital and the interest that you need. Any of these little details can be settled, or will settle themselves.

Dr. Miller—Mr. President, it isn't nice of Mr. Moore to get up and say what I was going to say. I was going to say pretty nearly the same thing. Mr. Hutchinson has been wasting time here, and I almost felt that he was wasting time in talking about the necessity of organization, and when he stopped you started to talk about the little things that would be met with to settle after you had become organized. How are you going to be organized? That is the important thing to talk about.

Mr. France—The great difficulty, so far as I see is, as Mr. Moore remarked, is to get the bee-keepers interested, to feel that it is a financial benefit to them, that they can not afford to stay outside of it. The bee-keepers in Wisconsin felt that they must belong to the State and to the National Association. We were the first to join the National in a body, and its influence is wide-spread now. But as to how to go at this is the question. I am at a loss to know how we are going to get them interested; to feel they are going to get something for the investment. We know that by organization much and great good can be done, but we can not with our membership now in the National Association—why, we are in our infancy.

Mr. Abbott—I like to agree with everybody if I can, but if I should tell all I think about this idea of a great honey-trust, or whatever you are a mind to call it, I doubt if very many of you would agree with me. I fully realize that Mr. Moore has touched the central thought, that the main thing, the essential thing, is to get the bee-keepers of the country to understand that they need something of that kind—to get them to have that kind of feeling.

Now, most of us look at bee-keeping as a professional pursuit, as an industry, a few of us, I would better say, as an industry for men to devote their life work to. I never have believed that bee-keeping would be a success in the United States in that way. My ideas are not along that line. I am a believer in bee-keeping as an adjunct to a farm, and I think we should keep that in view, so that I would have a little different idea, of course, of organization, because I would look at it from that standpoint. I would have to go back and discuss the question of whether it was a good idea to have a middle man or not. I think it is. I think the middle man is a good man. I think the Almighty made the middle man. I don't think modern society or modern business methods made him. He grew out of a natural condition of things, having an adaptation, when God made him, to do certain things. Some people have adaptability to produce nice goods; other people have adaptability to sell goods, and the production and selling of goods are two widely different things. The fact that "York's Honey" is every place, and that it is "York's Honey," is helpful to the bee-keepers who produce honey all over this country. If there was a Mr. York in every village of a thousand inhabitants all over the United States there wouldn't be any discussion as to the sale of honey. There isn't honey enough in the United States to-day to supply the demand, and there hasn't been enough to supply the demand in five years, much less the demand that can possibly be created. There isn't honey enough to be had in St. Joseph to eat the amount of honey they do, to supply the demand for two months. Now, there ought not to be any great question of disposing of the honey in that locality, but last week there came to me a shipment of honey, and more than half of it was mashed, the sections were broken and were in a dilapidated condition. I went down to the wholesale house the day before I went away, and I was told that they had a shipment of honey in there that was all mashed. I said, "You can sell it to me for 10 cents a pound, or else find some bigger fool and get 8 cents." He said, "I would rather sell it to you for 10 cents a pound." He didn't know what to do with it. I did. And I was glad to have it. Another shipment of honey came in from Washington, Kans., and every section was in nice shape. It was cased properly, and put into the cars properly, and looked after when it went out of the cars properly, because I looked after that myself, and of course that was done properly, and it got into my place of business in proper condition. I am holding it there for future use. I didn't have to bother any about that shipment of honey, it will take care of itself, but the letter that came from that man had something in it. He said he had learned how to handle his honey so he could sell for cash any place, and he wasn't dependent on any commission man or on anybody else for his honey. He wrote that to me after he had his check. I thought then he didn't require any special help to sell his goods, he seemed to think he had solved the problem for himself. He thought if he couldn't sell to me there would be another man he could sell to. There was York in Chicago. He could fire it up to York if he saw how nice it came in.

Pres. York—And you would probably never get any more of it!

Mr. Abbott—That's the reason I didn't tell the man's name, because York would probably try to get his honey next year! There are, of course, large honey-producers where it becomes a serious problem as to what they shall do with their honey. That's a business proposition, and it would take a business head to answer it. I am not built that way. I have too much vim or enthusiasm. I manage to get enough to live on, and when I get that I don't care about business anyway.

To be serious, I do believe that the secret of the sale of honey in the United States to-day is to teach the bee-keepers how to put up honey, and how to make it salable on the markets of the world. Why, they hire men to go from New York city, scour the country all through Colorado and Utah, all through that Western country, and pick up car-loads of honey, and they are anxious for it. Pay their expenses out there to get it. It ought not to be much of a question, or problem, as to where honey may be sold when men do that. If the majority of honey out there is in such condition that it can be packed in cars, and it is only the question of the honey being in proper shape, it seems to me that there is already a larger market for honey than can be supplied. Why are we saying so much about selling our honey? Is it so hard, after all, to sell it as it would seem to indicate by what we are saying about this organization? Is honey a kind of a drug on the market?

I have been looking all over the country trying to get honey in good condition, and to tell you the truth, that one shipment of honey is all I could get during the entire season that I could get and feel that it would be all right when it got there and meet the demands of that market. Now, there are so many people that have honey and don't know how to put it up, but there doesn't seem to be much honey in the market in the country. There hasn't been for years. That has been my experience. I may be wrong about it.

After all, is there so much trouble in the sale of honey? I am just asking a question. I don't pay so much attention to the financial side of it. I go out into the market to buy honey for my own little trade—a very small trade—and I find hard work to get good honey to supply that demand.

How will we organize? Now, I will tell you how I do business. I had to move not long ago, and the way I moved was this: I got my men, and I said, "I want you to get these goods to my place just as fast as you can." And when they didn't hustle fast enough I said this man go here, this that way, and the stenographer must pack that, and the goods were all up there in a very few days. Now, that's the only way I know how to do anything. Just to have some fellow to go at it, and do it.

Mr. Moore—There is a word in Mr. Abbott's remarks that strikes me. It reminds me of Mrs. Moore. I said to Mrs. Moore, "Dear, I know how you make up your mind. You find out which side of the question I am on, and then you are against me." Now, Mr. Abbott speaks of the farmer bee-keeper. I think he will admit, and you all will, that this is a day of specialties, and that it is the farmer bee-keeper that produces the honey in this country. I have sold honey about 16 years, and no matter about the producing of it, the selling of the honey has to be a specialty in this day and age.

In the last year I spent a great deal of time calling on retail grocery stores. If the honey was distributed equally according to the demand of the people, without any education, there would not be half enough to go around; but at present honey has been a drug. It is two cents in Cuba, and 10 to 12 cents a pound in our country. There is never enough fine, white, comb honey in one-pound sections produced in this country. It always brings a larger price. Our bee-keepers are producing liquid honey, and how to get that into the hands of the people is the burning question to-day. Mr. Abbott is speaking of the comb-honey question. There will never be enough of it. The bee-keepers are producing two or three pounds of liquid to one of comb, they can do it, and they are going to continue to do it. You witness this condition. Of course, you know where the great honey-producers are, and a fancy article of white clover and basswood honey can be bought, and the consumer is paying 20 to 30 cents a pound retail. There is no controversy about that. We don't object to the middle man. What we do object to is three middle men—the commission man, the wholesale grocer, and the retail grocer—three middle men coming in between the producer and the consumer. I witnessed this myself in my travels over Indiana. Local bee-keepers were getting last year's price for comb honey. They were getting 12, and 12½, 13 and 14 cents a pound. At the same time in Toledo they were selling it for 20 cents a pound in one-pound sections.

Dr. Miller—I found one grocer selling it for 23 cents by the piece.

Mr. Moore—I examined that, and half was second-grade and half was under grade. I have given a great deal of thought to this subject. I have thought so much about it that I don't know about it at all. I don't know what is best. If we could get these 700,000 people to interest themselves, their minds and their money, it would be decided right. We haven't, with our best efforts, been able to do so. My thought is this, and I give it to you for what it is worth. Those who are intensely interested—the Roots, York, Weber—we will form a stock company. We will have the authorized capital $50,000. We will incorporate under the laws of Illinois or New Jersey, whichever our lawyer says is best. We will establish at Chicago a headquarters. We will start that way and try it. We will do all the things that are necessary for success. Get the honey from the producer and pay him as much as you can, and make the expenses as little as you can, get as much as you can for the product, and make a success of it commercially. Suppose the first branch is in Chicago. You would have to have a reliable store. You would have to have some one competent. You would have to have a telephone, and say that every one of the 10,000 grocers can telephone in, "We want some honey." Have to have your wagons distribute it. Have to have an exhibit of live bees to show them that we weren't common, every-day Chicago sharpers shipping in honey; and you would have to locate somewhat centrally from Twelfth street. You would have the place jammed with people all the time.

This company should have a title that would stand to the people for its purity. A title that occurred to me was, "The Honey Company of the National Bee-Keepers' Association." Is that too long? The printer stamps it with one impression. The Honey Company of the National Bee-Keepers' Association, if you please, and actual bee-keepers. And, as far as limiting the amount of stock, you can't do that. You can limit a man only to the extent of his pocket-book.

Mr. Abbott—I knew I could make Mr. Moore make a speech. There was something I wanted to say, and it is this: The question of the sale of honey all hinges around the infernal adulteration that's going on in this land openly. That's the greatest monster that the bee-keeper has to tackle. If we can only wipe out the monster of glucose honey. I believe in that advertising scheme. Now, you have struck my idea. One such store would do much more to advertise and sell honey than anything I have ever heard mentioned. That is a splendid scheme, and splendid idea. That has been my idea all the time, and with the National Bee-Keepers' Association, that it has not made itself known. Mr. Moore suggests advertising, and it takes brass bands to run political machinery, and hurrah. The trouble with bee-keepers is, they haven't advertised. They haven't let the country know that they were in the world.

A party on the train said to me, "Where are you going?" "Up to Chicago to attend a bee-keepers' meeting." "Do *they* hold meetings?" "What do they do when they have meetings? Can a fellow afford to ride on the cars 400 miles to attend that meeting?" He didn't seem to know about the bee-keepers. But everybody knows about the Live Stock Show, and that the people from everywhere are coming to attend it. They have advertised—made themselves known. And now, then, I like that idea, but then I go back to my original proposition, the way to do that is for somebody to go ahead and do it, and Mr. Moore seems to know how it ought to be done, and if that is what we need why can't something of the sort be started, and see if we have bee-keepers enough to take stock in it. A stock company to do a thing like that—it will take a lot of hard cash to do it. How much stock do you think would be subscribed? Suppose a proposition of that kind should be put. My father kept a hotel, and some people came through the town, and their horse died right in front of our hotel. An old fellow who used to be a show clown, a kind of hard fellow, the people thought, and we kept a hotel and it wasn't our business to ask what kind of a fellow he was. He stood around there, and they kept a saying how sorry they were. Then the old fellow said, "Jimminy, craminy, how much are you sorry?" He put $5.00 on the horse, and said, "I am sorry that much." It wasn't two minutes, that was the end of it. He solved it with pretty rough language, but his $5.00 backed it up.

The question of the adulteration of extracted honey will largely solve the problem of the sale of extracted honey. I went to the National Manufacturing Company, of St. Joseph, and saw the genleman who ought to be a good man, and he took me down and says, "Come down, I want to show you." He took me down where he had a car-load of extracted honey, and over in another part he had a great pile of comb honey. He had gotten some extra-fine honey for his work. It has a good flavor to it. He said he would get rid of this in a little while. He puts three parts of glucose and one part of that honey, and sends it into Oklahoma and sells it for *pure honey!*

Mr. Moore—Medina, Ohio?

Mr. Abbott—That's the Glycerine Refining Company, and when you write to them about it they tell you to go to a place that's hotter than Ohio! Wipe out a few of those fellows; but that's the way they talk to us down in Missouri. The whole market is full of it. I stepped into a leading grocery—all friends of mine—but I told them the plain truth. "Do you know what that is there?" "Yes, I know what it is." "Do you understand the nature of that?" "Yes, we know all about it." "I know what that is exactly, it is adulterated honey." "But I thought you said you wouldn't handle any more of that, and now you stick that up by the side of my honey, and you hand it out to them and they think it is Abbott's." "We never do that. We tell them this is Abbott's honey." "But," I said, "you are injuring the market." "We bought this very cheap, and there are some people who want the cheap." When I inquired the price I found there was only a slight difference. The whole secret is, they buy the pure goods for 20 cents and sell for 25, and the other they buy for half, and they make more on that than they do on the better goods. The man who runs the grocery professes to be a good man, still he hasn't come to realize that setting up that goods which is manufactured and selling it to the people, not guaranteeing its purity, but implying it is pure, that that is a crime against society, and a crime against the interests of his own soul, and something ought to be done to make the country feel that.

Mr. Moore—I am sorry I have to disagree with Mr. Abbott about a law matter. These glucose people—we must respect their glucose. They have trained these grocers up for ten years. They don't want honey with the producer's name on it. They don't know us. I went into a grocery store, made it a specialty, and told them that I had 300 colonies of bees. The grocer didn't care to go any further. "What is the price?" The trade we care for is all that way, and the grocer prefers to sell a cheap article because he makes more profit on it. The thing to do is to brand our goods, and educate the consumer to ask for them, for just the moment they find out there is a bee-keeper's brand they won't have any other kind. My wife buys baking powder, and she wants either Dr. Price's or Royal, and she won't have any other kind. The people have been drilled into this.

Mr. Niver—I had a little experience. I was in Niagara Falls selling extracted honey to private houses, canvassing to see if I could raise the consumption in that way and I sold a big lot of honey, and the stores were full of glucose honey and nothing else, and there is a law in the State of New York which makes a possible fine of $200 a day, and each day is a separate offense. I did not go for the grocery man. I am willing they should have that trade if they will leave me the honey-trade. That may be selfish, but that's the way I look at it. The people gave me their honey-trade, and it was a big one. As Mr. Moore says, the liquid honey trade for the grocer is nothing at all. Nobody bought any honey there, or pretended to, because they believed it adulterated, but they would buy it from me, and continued to buy it week after week. There is one way that we can increase the sale of liquid honey.

(Continued next week.)

Contributed Articles

The Question of Foul Brood—Cause, Etc.

BY C. P. DADANT.

THE apprehension of bee-keepers has been very much increased lately, on both continents, by the assertions of Dr. Lambotte, concerning its idenity with a common bacillus known as Bacillus mesentericus vulgatus, which it appears exists very plentifully everywhere. These assertions, however, are very likely to prove erroneous, as a number of microscopists have taken issue with Lambotte and affirm that in spite of the similarity, the bacilli are different. Prof. F. C. Harrison and Thos. W. Cowan both raise objections, and the former shows by comparative tables that slight differences exist. In a matter of this kind it is very much as if we were to compare two snakes, the one poisonous, the other inoffensive. Differences which in a snake are easily noticed become much more difficult to detect in a microscopic organism. But we find those differences between dangerous and harmless diseases all around us. Is there anything more dangerous than diphtheria, or less so than an ordinary sore throat?

We can not be too cautious as to the spread of foul brood, and it is better to mistrust all appearances of diseased brood than be over-confident, but I believe there are many instances when foul brood is suspected where it does not exist. We are not as yet sufficiently informed on those diseases commonly known as pickled brood and black brood.

I had never seen foul brood until my trip to Colorado last fall, when I was given an opportunity of seeing it in three different places. It is quite prevalent in some spots, probably owing to the great number of bees kept in limited areas on a large scale, and in many cases by incompetent farmers as well as by practical apiarists. In one apiary of a very large honey-producer I was shown a colony which had been treated, being the sole colony in which he had found the disease, and we saw only one solitary cell of the disease. In other places it was more perceptible. But in each case the diagnosis was the same, the dark coffee-colored appearance, the glue-pot smell, the ropiness, the settling of the mass to the bottom of the cell, deeper at the rear than at the front, owing to the slight slant of the cells towards the rear—those well diagnosed indications were in each case the same. In each case the disease was well under control, but they showed me also in the dried-up combs, the brown scales of dried foul-brood quite perceptible to a searching eye. I came home very much impressed with the necessity of severe measures against the disease.

Several times during the fall and once this spring I have been asked about instances of dead brood, and in three cases samples were mailed me by apiarists in different localities of Missouri and Illinois. In neither of these cases did I see symptoms similar to those mentioned above. There was dead brood, dead larvæ in different stages, sunken cappings, but neither the glue-pot smell nor the ropiness were to be detected. An occasional larva had dried up and shrunk so that it was loose from the cell-walls, and could be dropped out by inverting the comb; others were stuck fast to the walls. One man reported that the disease had appeared in two or three colonies. He said:

"After a few days I went to examine the hive that had the dead brood. To my surprise I did not find a sign of it, but I found others that had it. Might not the bad weather be the cause of this?"

I wrote this man again in April to find about the condition of those hives. He replied, a few days ago:

"I received your letter. I don't think it was foul-brood, as the colony that had it worst got completely over it before the end of the season and harvested some honey. I am unable to find any signs of decayed brood in the hives this spring."

I really do not believe that disease was caused by the chilling of the brood (although we have had more than usually cool weather both in the fall of 1902 and in the spring), because, if the brood had been chilled, whole patches of it would be dead. We had entire combs of chilled brood, years ago, when we were practicing the spreading of the brood to induce prompt breeding in the spring. In such cases the brood was all dead, and the one or two instances that we saw, cured us thoroughly of the practice of inconsiderate spreading of combs.

From the descriptions Mr. France gave of pickled brood at the Chicago meeting, I would be tempted to decide that all those instances brought to my knowledge were of that kind. Now, will this pickled brood cure itself, or pass away? I would like to have Mr. France to tell us what he knows. I remember that when I was in Paris, in 1900, an old bee-keeper who was in charge of the Luxembourg apiary, in the heart of Paris, told me, with a shrug of his shoulders, that they had had foul brood in that apiary, but that it had become cured without doing anything for it. From what I have seen and heard about foul brood, this seemed rather odd, and I acknowledge that it did not give me a very exalted opinion of the bee-knowledge of the man who said it. I do not believe that foul brood will cure, of itself, without treatment; and wherever a disease of the brood has disappeared of its own accord, I am very much tempted to put it among the benign diseases. Very probably in such cases the bacillus is different. Might it not be that Bacillus Alvei is the true disease, while Mesentericus is a milder form? There is room for further scientific research on those points.

Whatever may be the case, we feel the need of competent and lively action on this matter in Illinois as in other States. I see by the American Bee Journal that the appropriation of $1,000 each year for two years in Illinois has become a law, and I believe it is time to act. It will be quite a relief to our bee-keepers to know that in case of diseases among their bees they can command the services of some one who will make these matters a constant study.

Hancock Co., Ill.

Thirty Years Ago and Now—Historical.

BY DR. G. BOHRER.

AFTER an absence of 30 years from the field of practical bee-keeping, I again have become the owner of some bees, and have renewed my subscription to the American Bee Journal. Samuel Wagner was its editor and publisher at Washington, D. C., when I first began to read it and contribute to its columns.

In 1864 I purchased and introduced my first Italian queen, being then a resident of Indiana. I paid Rev. L. L. Langstroth $10 for her, and was declared by some people as being mentally out of balance for having paid such a price for one "bug," and it a "hum-bug," at that, so they said. But I successfully introduced her to a large colony of black bees that I had transferred from a box-hive to one of Mr. Langstroth's 16-frame observing hives, which I constructed under instructions found in his book ("Langstroth on the Hive and Honey-Bee"). Inside of eight weeks after the introduction of the queen but few bees other than three-banded Italians could be seen. From this beginning I increased my stock to more than 100 colonies, all of which I sold in 1873 and located in Rice Co., Kan., where I still reside on a farm that I located upon, and I improved as a soldier's homestead. This country not being at all adapted to bee-keeping at that time was the reason why I dropped out of the business.

My health had been injured and my constitution shattered while in the army during our ever-to-be-regretted Civil War. Health was one of my chief objects of search in coming here.

Now alfalfa has become a common crop here, and thousands of fruit-trees and other honey-yielding plants are common, and the bees are rapidly becoming a source of income and profit.

On re-entering the pursuit of bee-keeping I note several changes of great importance. The most prominent and noteworthy is the amount of knowledge that has been acquired by the masses of our people concerning the habits and management of honey-bees.

Forty years ago I sometimes found it out of the range of possibilities to purchase a colony of bees, it being regarded as decidely a forerunner of bad luck to sell a colony of bees. Especially was it held as true that any one selling a colony of bees could never hope to keep bees with any sort of success again. That such superstitions have been superseded by a degree of knowledge and scientific advancement resulting in profit, pleasure and luxury, is most certainly a source of gratification to all our people, and especially to the bee-keepers who were active participators in this grand march of progress.

I have not on hand data that will enable me to present a tabulated statement as to the difference between the number of colonies of bees kept now and 40 years ago, together with the enormous increase in the amount of honey, wax and profit derived from the same annually; but to the most casual observer of the difference in the conditions then and now, the contrast will appear very great. In the meantime, many of our most prominent leaders have quit the stage of action. Among them, Mr. Langstroth—the greatest of them all—is no longer with us. Adam Grimm, Dr. Hamlin, Elisha Gallup, Samuel Wagner,' Chas. Dadant, Thomas G. Newman, and others, have been cut down by the Scythe of Time. Prof. Cook, Alley, Baldridge, Root, and possibly a number other prominent bee-keepers, I am happy to know, are still with us. And I sincerely hope to meet most of them at Los Angeles, Calif., in August, at the National Bee-keepers' Convention.

During the early 70's, at the solicitation of Prof. A. J. Cook, I discussed what was then known as the "Drone Question," before the Michigan State Bee-Keepers' Association. Mr. Langstroth, myself and others, took the position that the fertilization of the queen did not affect the purity of her drone progeny, which position drew the fire of several among the bee-keeping fraternity. I do not know whether this is any longer a question or not. But I note the fact that Elisha Gallup has drawn the fire of a number by assuming the ground that the maturing queen has an "umbilical cord." That there is a channel through which she receives the necessary nourishment to keep up the development process will not be questioned; but under the accepted definition of what is understood to be an umbilical cord, the term applied, as Mr. Gallup has used it, must be construed as largely figurative. An umbilical cord proper consists of an artery, a vein, a sheath and connecting tissues, and when performing its proper function is attached to a fetus at one end and a placenta at the other, which latter organ consists of two portions, viz,, a maternal and a fetal portion; the former being attached to both the mother and the fetal portion, and when thus connected is the channel through which the fetus or prospective offspring receives its substance until the period of birth has arrived. That there is no such connection between the mother queen and the queen in process of development is of course well known. Hence, to use the term as Mr. Gallup used it, must either be done in a figurative sense, or an additional definition to the term umbilicus must be added.

In conclusion, Mr. Editor, please permit me to state that in re-entering the circle of bee-keepers I shall not again engage in breeding queens and bees for sale as I once did, but to keep them for honey-gathering, and to be among the fraternity of bee-keepers is my sole object. I have passed my 70th year, and have abandoned the practice of my profession (medicine), and farming as well, and do not care to give any pursuit the unceasing attention required in breeding queens and shipping them. Lyons Co., Kans., May 22.

Queenie Jeanette is the title of a pretty song in sheet music size, written by J. C. Wallenmeyer, a musical bee-keeper. The regular price is 40 cents, but to close out the copies we have left, we will mail them at 20 cents each, as long as they last.

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

Bees Cleaning Out Comb.

When I was about 10 or 12 years old I had an uncle who kept bees in what is now a rather old-fashioned way, but I always enjoyed being around his bees, and some way (he thought it queer) they were never cross to me. Three years ago last fall I had quite a notion that I wanted honey for ourselves. I had a chance to buy one colony to bring home in the spring, so I bought it. They sent out a swarm the next season, but we got only about 30 pounds of surplus honey that year. We packed them for the winter in chaff hives, and they came out fine in the spring. Both colonies just doubled the next summer. We packed them as before, but out of the 4 colonies one died in the winter, so we put out but 3 colonies last spring. They doubled, and furnished us with all the honey we could eat, besides selling $18 worth.

When I first bought the bees I subscribed for the American Bee Journal, and we have read it ever since. We also got a book, "A B C of Bee-Culture," and studied it until we thought we knew a little of the business. Last fall my husband made up his mind that he could care for bees better than do what he was doing (market gardening), and he let all his tillage land except a little garden, and bought 54 colonies, making 60 in all, so we are "bee-ing" now. This spring has been extremely hard on the bees, there being so much rain. There have not been over four or five days that they could work.

1. In the last Bee Journal I noticed that you said bees would clean out comb without making holes through it, if properly handled. Now, we have fed ours honey in the comb this spring, and the combs were cleaned without injuring them, so I infer that either we or the bees handled it right—perhaps both—and what I want to know is: What would be an improper way? The way we did was to put the comb on top of the frames, and put cloth over it, and let the bees do the rest.

2. You asked what *my* work is now. It is to put sections together, and put in foundation, and put foundation in frames (self-spacing Hoffman). I use full foundation in every place. Are we doing right?

My husband says that if this weather continues we shall have to put the stands on stilts, and feed the bees with a bottle before fall; and then he thinks we shall know about bees! GRACE W. SAGER.

Benton Co., Minn., May 18.

ANSWERS.—1. From what you say I suppose you put brood-combs over a colony and let the bees take the honey. No danger of combs being torn in that way. The danger comes when you expose the combs away from the care of any colony. Even then old black combs will not be torn. But if you want to know "an improper way," just take a section of honey or a frame filled with new comb and put it where the bees can make a free-for-all attack upon it, and see if they do not chew a good part of it into bits.

2. Yes.

Beginning With Bees.

1. I am "the mother" in a large family, and wishing to "go into bees" with the idea of providing honey for my own family only, I write to ask you if you think it practicable for me, with hands already full, to try it. I have the book "A B C of Bee-Culture," and am taking the American Bee Journal, but I can't find much for beginners. In your department some answers to the following might be very timely to others besides myself.

2. What examination is needed to know that bees are satisfactory? We bought two colonies that were *not*—worms, etc. We destroyed hives and all.

3. What ought one to pay, and what kind of hives?

4. When ought they to be moved to gather honey this season?

5. What supplies besides the bees will it be necessary to have at the start? Will you tell me what I should look up

in the "A B C of Bee-Culture?" I fail to interest myself to open at random. I am such a busy woman.

I hope I am not asking too much.

Mrs. J. J. Garrison.

Van Buren Co., Mich., March 27.

P. S.—I send this written nearly two months ago, but unmailed because the answers I'm afraid are too simple.

I enjoy our department, and wish I could contribute from my experience. I shall try to as data come. I do want to learn before I begin. You editors write for old hands, not for ignorant people, or I am mistaken.

J. J. G.

Answers.—1. Yes, I surely think it practicable to provide honey for your own family. Honey is a delicious, healthy sweet for children—for grown people as well—but I think children nearly always crave sweets of some kind, and honey is good for them instead of being harmful as are candy and sweets of like nature. Even with hands already full, you can no doubt find time to care for two or three colonies of bees, and the time spent with them will be a restful change for you—perhaps just what you need, a blessing as well as a profit.

2. If in movable-frame hives, remove the cover and lift out the frames to examine them. Italian bees will usually protect themselves against the ravages of the worms. Black bees are not so good in that respect.

3. It is not easy to give a satisfactory answer to this question, so much depends upon circumstances, and prices vary so much in different localities. It may be well to find out what bees can be secured for in movable-frame hives near home, and compare prices with those who advertise bees for sale, then you may be able to decide which is best. Heavy express charges must be considered, however.

4. The sooner the better.

5. One of the first things you will need will be a smoker. You will need for each colony, in case of a swarm, a hive filled with frames, the frames to be supplied with starters or full sheets of foundation (better have full sheets). Also two or three supers for each colony to hold your sections, if you work for comb honey. If you work for extracted honey you will need hive-bodies and frames instead. If working for comb honey you will need sections and foundation for them. For me, a bee-veil and gloves would be indispensable, but every one does not use gloves. Even if the bees did not sting I should want the gloves to keep the bee-glue off my fingers.

6. If you have not the time to read the whole of your bee-book, I should advise you to look up, by means of the index, the points that you are especially interested in, and want information about, from time to time, such as swarming, clipping queens, putting foundation in sections, etc. I think as you get the bee-fever your interest will grow.

Now, if these answers are not perfectly plain, don't hesitate to write again. This department is certainly intended for the beginner as well as the old hands, and it is not the fault of the beginner herself if her needs are not met, so long as she has the fullest liberty to ask questions? If things are not made plain, just write again, and please don't worry about your questions being too simple. Others may be having the same trouble, and the answer to your question may be of benefit to many others besides yourself.

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

OSMOSIS—HOW ABOUT IT?

When the human skin takes oxygen from the air is it not rather stretching the use of terms to call the process, "osmosis?" College man might say so, but if common "feller" said it some one would grin. A good rhetorician usually avoids pushing his extreme verbal rights. Otherwise he might get too often to the point where "No man understandeth him." "Osmosis much more rapid from water to salt than from salt to water." If I understand this correctly it is that more unsalted water will pass in through the membrane than salted water will pass out. Thanks to Prof. Cook for mentioning the fact. Big mystery may be hid somewhere in that vicinity. Here's a wild grape-vine in a tree. Cut it off 50 feet up and it drips copiously for many hours. Might almost compare it to an engine-hose. I suppose it is osmosis that does the thing; but scientists do not claim to tell us *all* the why of it, I believe. A mere plant, with no animal powers, where does it get the force, the energy, to throw fluid up that way? Page 293.

MR. CILLEY'S FORCED SWARMING.

That's the way to talk it, Mr. Charles W. Cilley—no natural swarm for four years, and no case of a forced swarm deserting. When the rest can say so we will write the word "Success" on—well, the process. Was going to say on forced swarming, but the words stuck in my throat somehow. Premium of five cents for a better and more satisfactory term. Page 294.

ELEMENTS OF SUCCESS—BEE-OLOGY AND THEOLOGY.

Mr. Doolittle's last paragraph, page 295, is very suggestive, indeed. The elements of success are usually many. How prone we are to hobbyize and magnify one of them till it hides all the others. That won't do. Unless all the prime elements of success are put in, superfine and gilt-edged treatment of one of them will avail but little.

Alley cells fragile; Doolittle cells strong—seems to be the way that matter differentiates.

Can't find much of a flaw to criticise in Mr. Doolittle's bee-ology this time, but can criticise his theology—just a trifle. He says the Creator *pronounced* the bee good, when the text says he *saw* it to be good. Is this too awfully minute? I think not. Those of us who are trying to be scripturally devout, and trying to take in cordially the facts of modern science, too, have a big contract. Are we not all just scratching around, and sticking in our toe-nails, to accomplish the things we propose to ourselves? Trying to hold our devotion, our Scripture, and our science, all three, we think of the babe trying to hold three big oranges. We must keep our religious ideas licked into the best shape possible in order that holding on may be possible. A little misquotation, *if it is in the direction of greater difficulty*, is big enough to object to.

FOUL BROOD IN ONTARIO.

And so when they tell us that foul brood is almost exterminated in Ontario, Mr. Holtermann feels it his duty to take the role of hold-up man. Almost too strong a word? All right, I suppose, to feel a *little* jubilant over complete victory somewhere in sight; but we mustn't jubilate ourselves out of reach of the truth. Page 300.

PERFUMES TO STOP ROBBING.

"Some she gave 'lasses, and some she gave bread,
And some she gave ——."

And Ira Barber followed suit, giving one peppermint, and one wintergreen, and one onions, etc. This to discriminate friends from foes among robbers. I would say to the too-eager beginner, Don't go into that sort of thing unless you are sure you need to. And don't expect it to cure ordinary, battle-of-Waterloo robbing. I guess it would be effective to stop quiet, sneak-robbing if you've got that. Page 302.

KEEPING A FAMINE-SMITTEN SWARM.

Dr. Wiseman was very lucky to have his famine-smitten swarm stay seven days, and give him a chance to feed them. In case a swarm is beginning with nothing, and the weather is such as plainly prevents their gathering anything, they should be looked to within three days. The rations they carry along should not be counted on for more than that—in fact they sometimes seem to carry almost nothing. The second evening is the correct time to give them something. There is a choice, however, as to how much you will feed. A half-pound feed, repeated if weather keeps contrary, will hold them. Page 302.

RIGHT MAN NEEDED IN ILLINOIS.

Illinois now seems to have public money available to suppress foul brood, but not in an act granting special powers to inspectors. All the more need to appoint just the right man if they must rely on "speaking gently" without any "big stick." Diseased apiary bad—diseased apiary owned by cranky, ignorant, unreasonable man several degrees more to the bad. Page 308.

HE RAPPED ALFALFA HONEY.

I see Pres. Crane, of the Vermonters, raps alfalfa honey as of flavor decidedly inferior to clover and basswood. Carload of it got provokingly in his path. Might it not have tasted just a little better had there been no crowding? I believe *some* persons, not having any self-interest to prejudice them either way, call alfalfa honey the best. Page 309.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Moving Bees a Long Distance.

1 have decided to move 150 colonies of bees some 500 miles. Will you please advise me as to the best way to prepare them for shipment? They will go all the way by rail. Can they be moved all right now, or would I better wait until the weather gets some cooler? They will go in one car all the way. ALABAMA.

ANSWER.—They may go all right now, having the car open enough for ventilation, and the hives sufficiently ventilated, but it will be safer to wait till cooler weather. If the frames are not of the fixed-distance kind, they must be fastened so they cannot move in the hive. The matter of ventilation is of the greatest importance, and just how to provide that depends somewhat on the kind used. The entire top may be covered with wire-cloth, and if one hive is piled on another, strips must be fastened on the lower hive so the air can get between. The hives must be placed in the car so that the frames run parallel with the railroad track.

◆

Queens Going Through Excluder-Zinc.

I had five very strong colonies of bees. I put two frames of brood with a queen in an 8-frame hive with starters on six frames and queen-excluder on the bottom hive. I left the old hive on top, and every queen went to the top, and they were large queens. VIRGINIA.

ANSWER.—For a time it was a somewhat unsettled matter as to the right size of perforations in excluder-zinc, and some was made with perforations too large. Possibly your excluder was faulty in that direction. The perforations should not be larger than one-sixth of an inch.

◆

Rheumatism from Bee-Stings.

I am just getting up from a bad spell of inflammatory rheumatism. The doctors said I had a close call ever to get well. The professional doctor of this country claims it was from bee-stings, saying that when a bee stings, the poison never comes out, and when enough of them sting it poisons the blood. But I have argued that it was from hard work and exposure, for I have worked very hard for the last ten years trying to keep my work in good shape. Now, I will tell you what I have to do, and you can see whether it is enough to cause any man to break down. I have 200 colonies of bees, and have read bee-books and bee-papers, trying to do my work in an up-to-date way. I have also 15 acres of strawberries and 6 acres of blackberries and raspberries, and 1500 apple-trees. Do not understand me to say that I do all this myself. Of course, there are lots of good hands, but so many that do not do their work right that I have done too much myself. Of course, I did not wear a veil, and got thousands of stings, but they did not seem to hurt me, and I have been in the bee-business for a year.

My bees are rolling in honey, and it keeps my wife and little girls busy making foundation and putting on supers.

I still think the "Old Reliable" is worth its weight in gold.

ARKANSAS.

ANSWER.—There have been many cases reported in which rheumatism has been cured by bee-stings, while others suffering from the disease report no benefit from stings; but this is the first time I have seen any report of rheumatism *caused* by bee-stings. I think your doctor must be mistaken in the matter. With the work you have been doing there is no need to charge your rheumatism to the bees; hard work is all that is necessary, with no doubt some exposure mixed in.

◆

Queenless Colonies—Number of Bees in a Colony—King-Birds—Wild Bees.

I. On page 331, in Question No. 1, about queenless colonies, I guess I did not state plainly enough what I wanted to know. It was, What made them queenless? At this early date of March the old queen would not be likely to fly out, would she? Or might it have been supersedure?

2. How many bees are estimated to be in a medium populous colony?

3. Do you consider that king-birds do any damage, and should they be killed?

4. I notice a number of different kinds of bees working on the flowers here besides the honey-bee and bumble-bee. Do you think any of these are very good honey-gatherers, and has anyone ever tried to domesticate them? Some of them work on very small flowers that honey-bees won't touch.

I found some white clover in bloom here on May 19, and some dandelion the middle of April. MICHIGAN.

ANSWERS.—1. No, the old queen would not be likely to fly out either late or early. I had an unusual number of colonies become queenless this spring, and I don't know for certain why. Your colony may have become queenless because of attempt at supersedure, as you suggest, and some accident may have happened to the queen, but there seem to be cases hardly to be accounted for in either way, and I don't know how to account for them.

2. At a rough estimate, perhaps 30,000.

3. The weight of testimony seems to be against them.

4. I think they have none of them been domesticated, don't suppose they can be, and don't suppose they would be of any value if domesticated. When a boy, I tried domesticating bumble-bees, but the amount of honey obtained didn't amount to anything, and I don't suppose any of the others would do as well as bumble-bees.

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We have some of the seed of that famous honey-producing plant—Catnip. It should be scattered in all waste-places for the bees. Price, postpaid, 15 cents per ounce; or 2 ounces mailed **FREE** to a regular subscriber for sending us one **NEW** subscriber to the Bee Journal for one year, with $1.00; or for $1.20 we will send the Bee Journal one year and 2 ounces of Catnip seed to any one.

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FROM MANY FIELDS

Weather Conditions Better.

I had a fine swarm to-day, which I hived on the old stand and gave the brood to growing colonies. There is some sealed honey in one super. The prospect here is fine. White clover is everywhere. There is a decided change for the better so far as the weather conditions are concerned. R. B. MCCAIN.
Grundy Co., Ill., June 8.

The Division-Board Feeder.

I wintered my bees without loss. I have had a number of swarms, something not known here in May. I use the division-board feeder, and when beginners ask what kind of a feeder to use in the Bee Journal, I wonder that they are not told that it is the best for slow feeding—three pints to two quarts at a time; use it at night, and there will be no robbing.

When I packed my bees last fall I found a colony that cast a swarm in September and had been robbed, but had a young queen. I put in a division-board feeder, ran a tin tube through the oats chaff I use for packing on top of the hives, down into feeder, and when

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2-frame Nucleus (no queen)	2.00	11.00	21.00

Add price of any Queen wanted with Nucleus.

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Safe arrival guaranteed of all stock sent out.

BATAVIA, ILL., Aug. 21, 1901.

Dear Sir:—I thought I would let you know as to results of the nucleus sent me. They were placed in 10-frame hives and now they are in fine condition. From one I removed 24 pounds of honey and had to give 6 of them more room, as they were hanging out. They have more than reached my expectations.

Yours respectfully, E. K. MEREDITH.

DAVENPORT, IOWA, Dec. 31, 1901.

Your queens are fully up to standard. The honey queen that you sent my brother takes the lead. She had a rousing colony when put up for winter. The goldens can be handled without smoke or veil. Very truly yours,

JOHN THOEMING.

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GUS. DITTMER, Augusta, Wis.

we had a day the bees could fly I would go and take off the cover to the winter-case and run a stick down through the tin tube into the feeder, and if I found no feed I put in sugar syrup—three parts sugar, one part water—hot right from the stove. I did not expect they would live, but they did, and came out strong last spring. I had a very poor season last year. C. G. ASCHA.

Berkshire Co., Mass., May 31.

A Discouraging Outlook.

The big freeze of last April was followed by fairly warm weather through May, but it was quite windy a large part of the time. The bees did quite well, however, as there was an extra-fine dandelion bloom, and some colonies were nearly ready to swarm; in fact, I heard of one stray swarm a week ago. But the last week or 10 days it has been excessively rainy, and now it is cold and cloudy, with the bees destitute of honey. Many of the best colones are running out drones, while the ground is getting white with clover bloom.

Truly, the prospects of no honey crop can "go glummering" more easily than that for honey, and yet "Hope springs eternal in the human heart," especially if it is a bee-keeper's heart. For let the present be never so barren, cheerless or dreary; the glorious prospects for "next year" still, still loom ahead.

E. S. MILES.

Crawford Co., Iowa, May 31.

Cause of Foul Brood.

Out of 90 healthy colonies on May 1, fully 60 are more or less affected with what I take to be foul brood, the first I have had in the yard. It appeared in the home yard and in the new yard at another place, where I have most of the bees.

I watered the bees in a trough, and as a number of them got drowned in it, this made the water smell before I cleaned it or them out as the weather got warm. The dead brood and combs smell the same as the water did. Might this not be foul brood?

I wish to know first the cause of foul brood, but the "Smart Set" are wholly ignorant of the cause. Root's "A B C of Bee-Culture" has "Foul Brood and Its Cause" indexed, but says not a word as to the cause. It doesn't even say that they do not know the cause. There is a good, big field for the discovery of the cause, and an important one, too.

Bees wintered well, and are in fair condition. Rain is much needed, with a higher temperature. D. C. BACON.

Bradford Co., Pa., June 1.

Too Rainy for Bees.

Bees are breeding up very well, but are quite short in stores, as the fruit-bloom is all frozen. We have had rainy weather here since May 10, with some very hard, washing rains, and it is still raining, so the bees can not fly much. White clover is blooming abundantly. D. E. EVERS.

Otoe Co., Nebr., May 30.

Alfalfa Honey in Wisconsin.

I saw in the last Bee Journal, in "Our Bee-Keeping Sisters'" department, the statement that there has never been any report of alfalfa yielding honey east of the Mississippi River. I believe Dr. Miller made the same statement. Now, I want to say to them that we have produced thousands of pounds of alfalfa honey right here in old Wisconsin. We have lots of alfalfa, and get lots of honey from it, as our State Inspector, N. E. France, will testify. We have plenty of white clover and an abundance of sweet clover and basswood. But we get very little honey, as a rule, from the basswood. Alfalfa has been raised here for years, standing the winters well, and making the best of fodder for stock.

Now, don't say a word about this to any one except Dr. Miller's family, for this locality is already overstocked with bees. We (my boy and myself) will run over 200 colonies this year to extracted honey, which will be marketed in our home town. We have been years educating the people to extracted honey, and can now dispose of our entire crop of A No. 1 clover and alfalfa honey at tip-top prices. I have lately had occasion to travel over a large part of the State, and find that bees, on the average, have wintered well, and the prospect is good for the coming season.

R. K. Dye.

Fond du Lac Co., Wis., June 2.

Very Dry in the East.

I wrote you some time ago how well my bees wintered. I write you again how they came through the spring. I have lost about 50 colonies, and have 100 now, with not over 100 quarts of bees in the lot, and very little brood. I have 75 very good colonies, but they are getting poorer every day. There are very few bees flying in the yard—nothing for them to get. My bees did not lack honey, but the wind has been in the north most of the time for 55 days. When the sun comes out warm bees leave the hive, and it will cloud over and leave the bees in the fields to perish. All the bees now in the hives are from eggs layed the warm spell we had in March. As near as I can figure, there is not anything they can gather from now. Basswood is not budded to bloom; blue thistle is dried up. We have had no rain to speak of in two months. The losses of bees so far this spring will be about 50 percent in this vicinity, with a fair prospect of losing the rest. But it is just as bad on the farmers. I know of several that keep from 20 to 40 cows, and it looks as if they would not be able to cut two tons of hay for each.

C. M. Lincoln.

Bennington Co., Vt., June 1.

Beedom Boiled Down

Spreading Brood a Two-Edged Sword.

Editor Hyde says in the Progressive Bee-Keeper:

For localities where the honey-flow comes late and the bees have a long season in which to get bred up, it certainly will not pay to spread brood, it will simply be a great loss. In the hands of experienced men and in the right localities and in the right seasons, there is nothing that the bee-keeper can do that will pay more than the scientific spreading of brood. In the hands of the inexperienced or in the wrong season there is nothing that will cause more loss than spreading brood. I am honest when I say that I believe there has been more loss by brood-spreading than there has been gained. But because there is loss with the wrong parties and in the wrong seasons, is no argument against it if done in the right way and at the right time.

How Much Is a Good Queen Worth as a Starter?

A. I. Root tells in Gleanings in Bee-Culture about a visit in Cuba to C. E. Woodward, who has been there three years, is now the active partner in 2000 colonies in seven apiaries, and was just filling an order for extracted honey to the amount of $16,000 to be shipped to Germany. Mr. Root says:

Ernest has been pretty thoroughly criticised, not only in Gleanings, but in other bee-journals, for suggesting that our red-clover queen was worth $200. Now, mind you, I am not going to advertise *our* queens this time. Friend W. got his best queen of our veteran friend Doolittle. He paid $10 for her, and then paid for a nucleus besides to ship her in, so as to have her come in good order ready for breeding. He has stocked the whole apiary I saw with queens from this Doolittle queen. The hives are two-story, and some of them three-story. The bees are nicely marked, gentle to handle, and good workers.

"Friend Woodward, how much do you sup-

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Daughters of Select Imported Italian, Select long-tongued (Moore's), and Select, Straight 5-band Queens. Bred 3¼ miles apart, and mated to select drones. No bees owned within 2½ miles; none impure within 3, and but few within 5 miles. No disease. 30 years' experience. WARRANTED QUEENS, 75 cents each; TESTED, $1.50 each. Discount on large orders.

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pose that Doolittle queen has been worth to you—that is, how much money has this apiary given you because of the fact that every queen is of that Doolittle strain instead of being of the hit-and-miss kind which most of the Cuban bee-keepers get along with? Haven't you actually saved $200, the price Ernest put on our choice queen?

"Why, Mr. Root, that Doolittle queen has been worth *five hundred dollars* to me, counting the queens I have reared from her that have been used to stock others of our apiaries; and I am testing some of her daughters with the view of using them for breeders when she is gone."

Now, friend Woodward may have been a little extravagant in the above; but I will leave it to our veterans in bee-culture—is it not possible that a bee-keeper can be benefited to the extent of hundreds of dollars by *starting business* with a queen that is superior as a breeder?

Strong Colonies for Wintering.

Kepler found that that the ratio of squares and cubes determined the distances of the planets and their periodic times, but long before Kepler's day the bees found that the very same ratio, *i. e.*, the proportion of volume to surface would enable them in cluster to survive the winter. They found that as they increased the size of their clusters the radiating and cooling surfaces proportionally diminished, and if they made their clusters large enough, and the cooling areas small enough, and they could find food to eat, they could

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All my Queens are reared by the good old-fashioned system—the way they were reared when all queens lived three years—the bees stored lots of honey and gave such great satisfaction. These Queens are large, hardy, and reared from the best honey-gathering strain I ever saw. Queens not coming up to above guarantee replaced or money returned.

One queen, $1.00; 3 queens, $2.75; 6 queens, $5.00; 12 queens, $9.00. My new book on Queen-Rearing given to all who purchase three or more queens. Send for Catalog.

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defy the "freezing, bitter sky." They found that the loss of heat from their clusters was inversely as their diameters, and that an eight-inch cluster had twice the advantage of a four-inch cluster in retaining its heat, and a four-inch cluster four times the advantage of a one-inch cluster, but for reasons to be adduced hereafter, the larger clusters will be shown to have a much greater advantage.

The old bee-keepers, with their straw-skeps, found out that two colonies united for wintering would consume less than even one colony. They did not understand this, but as they increased the size of the clusters by adding more bees, the loss of heat from the cluster must have been greatly diminished, and this, no doubt, is the true explanation.

It is certain that the more bees that can be safely wintered in a colony the more honey will that colony store in the coming season; and it is about equally certain that bee-keeping is about to advance in the direction of larger clusters.—A. W. Smyth, M. D., in Irish Bee Journal.

Time Needed for Pressing Out Wax.

In the experience I have had pressing wax, it has appeared to me that *time* is one of the most important factors—a factor that has not been sufficiently emphasized. If you double your pressure and cut your time in two, I think you'll not get as much wax. If you give half the pressure for twice as long, I think you will get an increase of wax.—[Right you are, Doctor. We have learned by experience that it is not tons of pressure, but a mild pressure exerted often or continuously, that does the work. The free wax must have *time* to disengage itself from the mass of foreign matter; and a high pressure in a short time will not accomplish as much as a low pressure applied intermittently; but each intermittent pressure should be a little harder than the one preceeding; that is to say, the mass of slumgum should be reduced in size a little at a time. One may say it takes time to do all this. That is true; but at the present price of wax it *pays* to take the time, especially if taken in bad weather or at night.—Editor.]
—Stray Straw in Gleanings in Bee-Culture.

Getting Pollen Out of Combs.

In Gleanings in Bee-Culture is given a conversation between G. M. Doolittle and a visitor who asks what to do with combs filled with pollen. Mr. Doolittle advises giving such combs to the bees, if the pollen be in good condition. The conversation then continues, the visitor leading:

"But a part of the combs containing pollen have been off the hives for three or four years, and it seems to have hardened in the cells, so I judge the bees can not remove it."

"I have had a few combs like these, and I place such in tepid water, and allow them to remain thus for a few days, when the pollen will all be soaked soft; and by putting them in the extractor after this, the most or all of it can be thrown out. I have so few that I do not wish to dirty up the extractor for them. I shake what I can out of the combs after the soaking process, when the combs are put in sweetened water for a few hours, and then given to the bees, which will clean them up as good as new. In fact, I think this the better way to work at all times, as it incites the

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This Emerson stiff-board Binder with cloth back for the American Bee Journal we mail for but 60 cents; or we will send it with the Bee Journal for one year—both for only $1.40. It is a fine thing to preserve the copies of the Journal as fast as they are received. If you have this "Emerson" no further binding is necessary.

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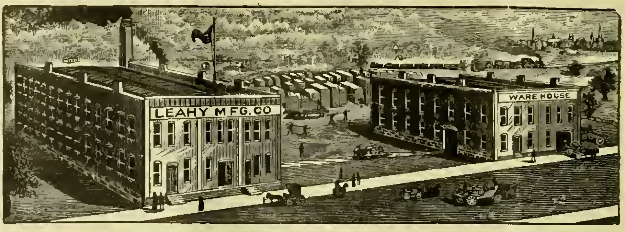

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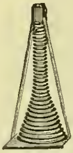

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bees to activity, cleans the combs, and produces more brood than would otherwise be reared."

"I thought of throwing these combs containing old pollen into the solar wax-extractor, and not trying to save them, even if I did preserve those having no pollen."

"I would not do this, even did I intend to melt these combs."

"Why? Is not that the best way to get the wax from them?"

"It is the best way to get *no* wax from them. I find that where there is much pollen in combs thus melted, said pollen will absorb all the wax there is in these combs, and quite a little more from other combs which may be in with this. Since discovering this fact I am careful how any pollen is allowed to go into the solar wax-extractor, as pollen is a great absorbent of melted wax."

"How would you render such combs then?"

"If combs containing much pollen are to be rendered for wax it should be done by means of boiling water, as the water in agitation from boiling dissolves the pollen as well as to liquefy the wax, thus allowing the wax to escape without being absorbed by the pollen."

The use of *sweetened* water to get the bees to clean up the combs is perhaps new, and seems an excellent idea.

Close Saturdays at 1 p.m.—Our customers and friends will kindly remember that beginning with July 1, for three months we will close our office and bee-supply store at 1 p.m. on Saturdays. This is our usual custom. Nearly all other firms here begin the Saturday afternoon closing with May 1st, but we keep open two months later on account of the local bee-keepers who find it more convenient to call Saturday afternoons for bee-supplies.

CONVENTION NOTICE.

Texas.—The Texas Bee-Keepers' Association meets in annual convention at the Agricultural and Mechanical College, at College Station, Texas, July 7 to 10, inclusive, during the Texas Farmers' Congress meetings. Cheap excursion rates. Large crowds. A good time. Learn a heap. Meet your fellow-men, and talk. Exhibits of all kinds of stuff. Premiums of all kinds awarded. Come, and bring what you have, and take home some of the premiums. You are invited. Be sure to be there. July 7 to 10. 1903, at the A. & M. C. of Texas, College Station.

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Forty Years Among the Bees, by Dr. C. C. Miller.—This book contains 328 pages, is pound in handsome cloth, with gold letters and design; it is printed on best book-paper, and illustrated with 112 beautiful original half-tone pictures, taken by Dr. Miller himself. It is unique in this regard. The first few pages are devoted to an interesting biographical sketch of Dr. Miller, telling how he happened to get into bee-keeping. Seventeen years ago he wrote a small book, called "A Year Among the Bees," but that little work has been out of print for a number of years. While some of the matter used in the former book is found in the new one, it all reads like a good new story of successful bee-keeping by one of the masters, and shows in minutest detail just how Dr. Miller does things with bees. Price, $1.00.

Bee-Keeper's Guide, or Manual of the Apiary, by Prof. A. J. Cook, of Pomona College, California. This book is not only instructive and helpful as a guide in bee-keeping, but is interesting and thoroughly practical and scientific. It contains a full delineation of the anatomy and physiology of bees. 544 pages. 295 illustrations. Bound in cloth. 19th thousand. Price, $1.20.

Langstroth on the Honey-Bee, revised by Dadant.—This classic in bee-culture has been entirely re-written, and is fully illustrated. It treats of everything relating to bees and bee-keeping. No apiarian library is complete without this standard work by Rev. L. L. Langstroth—the Father of American Bee-Culture. It has 520 pages, bound in cloth. Price, $1.20.

A B C of Bee-Culture, by A. I. & E. R. Root.—A cyclopedia of over 500 pages, describing everything pertaining to the care of the honey-bees. Contains about 400 engravings. It was written especially for beginners. Bound in cloth. Price, $1.20

Scientific Queen-Rearing, as Practically Applied, by G. M. Doolittle.—A method by which the very best of queen-bees are reared in perfect accord with Nature's way. Bound in cloth and illustrated. Price, $1.00; in leatherette binding, 60 cents.

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Advanced Bee-Culture, Its Methods and Management, by W. Z. Hutchinson.—The author of this work is a practical and entertaining writer. You should read his book; 90 pages; bound in paper, and illustrated. Price, 50 cents.

Bienen-Kultur, by Thomas G. Newman.—This is a German translation of the principal portion of the book called "Bees and Honey." 100-page pamphlet. Price, 25 cents.

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HONEY AND BEESWAX

MARKET QUOTATIONS

CHICAGO, June 5.—The market is lifeless, no movement except extracted at low prices. Best grades of white extracted, 5½@6 cents; amber, 5@5½c. Comb honey is held at 15c for choice white, and anything not grading up to meet this requirement sold at 2@5c less per pound. Beeswax, 32c. R. A. BURNETT & CO.

KANSAS CITY, June 9.—No comb honey in our market. White or light amber would sell quickly at $3.50 for 24-section cases. Demand light for extracted, at from 5½@6½c. Beeswax in demand at 25@30c. C. C. CLEMONS & CO.

ALBANY, N. Y., Mar. 14. — Honey demand quiet; receipts and stock light. Comb selling, light, 15c; mixed, 14@15c; dark, 13@14c. Extracted, dark, at 7@7½c. Beeswax firm, 30@32c.
H. R. WRIGHT.

CINCINNATI, June 1.—Very little change in market from last report. We quote amber extracted grades at 5½@6½c in barrels; white clover, 8@9c; supply equal to demand. Comb honey, 15@16c for fancy. Beeswax, 30c.
THE FRED W. MUTH CO

NEW YORK, May 21.—Comb honey trade exceptionally quiet, very little doing. Fancy stock not plentiful and is sold at 14c. A large supply of other grades on hand, which we are quoting at from 11@13c, according to quality, and in large lots make concessions from these prices. Extracted, unusually quiet, and prices show a downward tendency all along the line. Beeswax, firm at from 30@31c.
HILDRETH & SEGELKEN.

CINCINNATI, June 8.—We have reached the time when there is no settled prices in the honey market. Everybody is waiting to learn how the crop will turn out, therefore we will sell or ask the old price; fancy water-white comb brings 15@16c. Extracted, amber, in barrels, 5¼@5½c; in cans, 6@6½c; white clover, 8@8½c. Beeswax, 30c. C. H. W. WEBER.

SAN FRANCISCO, Apr. 29.—White comb honey, 12@12½c; amber, 9@10c; dark, 7@7½c. Extracted, white, 6½@7c; light amber, 5½@6c; amber, 5@5¼c; dark, 4@4¼c. Beeswax, good to choice, light 27@29c; dark, 25@26c.

Last year's product has been tolerably well cleaned up, particularly the desirable stock. Present offerings are largely odds and ends, including little of fine quality. Values for the time being are little more than nominal. A lower range of prices is looked for on coming crop.

WANTED WHITE CLOVER EXTRACTED HONEY!
Send sample and best price delivered here; also Fancy Comb wanted in no-drip cases.
THE FRED W. MUTH CO.
32Atf Front and Walnut, CINCINNATI, OHIO.
Please mention Bee Journal when writing.

WANTED!
CALIFORNIA COMB HONEY in car-lots. It will pay you to correspond with us.
THOS. C. STANLEY & SON,
24Atf MANZANOLA, COLO, or FAIRFIELD, ILL.

WANTED—Extracted Honey.
Mail sample and state lowest price delivered Cincinnati. Will buy FANCY WHITE COMB HONEY, any quantity, but must be put up in no-drip shipping-cases.
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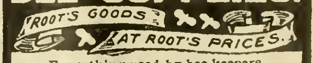
2146-48 Central Ave., CINCINNATI, OHIO.
24Atf Please mention the Bee Journal.

BEE-SUPPLIES!



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W. M. GERRISH, Epping, N.H., carries a full line of our goods at catalog prices. Order of him and save the freight.

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Fourth of July Excursion
over the Nickel Plate Road at one fare for the round-trip, within a radius of 200 miles from starting point. Tickets on sale July 3d and 4th, with return limit of July 6th. Through trains daily in each direction between Chicago, Cleveland, Buffalo, New York, Boston, and intermediate points. Every facility offered for the comfort of the traveling public. Individual Club Meals, ranging in price from 35c to $1.00, and meals a la carte, in dining-cars on Nickel Plate Road. City Ticket Offices, 111 Adams St., and Auditorium Annex. 'Phones Central 2057 and Harrison 2208.
13—25A3t

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Very fine pure-bred BARRED PLYMOUTH ROCK Chickens and Eggs for sale at very low prices.

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The classic in Bee-Culture—Price, $1.20, by mail.

BEESWAX WANTED at all times.

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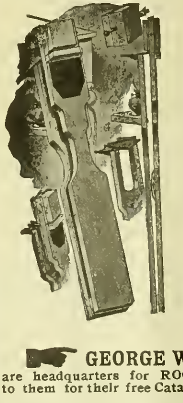
No Well-Regulated Apiary

devoted to the production of comb honey should be without a HUBBARD SECTION-PRESS. A number of machines have been experimented with for years past, some of these were for the folding of the sections only, while some have endeavored to accomplish both the folding and attaching of the Comb Foundation in one operation. The general verdict is that this latter class are both cumbersome and do unsatisfactory work. The HUBBARD SECTION-PRESS was improved a short time ago so that now it is adjustable for all regular one-pound Sections both square and tall. The machine is built on the toggle-joint principle, one by which great power can be applied. One is not only, by the use of a Section-Press, enabled to put up Sections much more rapidly, but square joints are also secured without any effort on the part of the operator; and unless you have these square joints you are liable to break some of the sections in crowding them snugly into the supers. Price, $2.50; weight, 25 pounds.



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has recently been improved. A new and heavier plate, adjustable block for different widths of sections, as well as provision for different sizes of sections by changing the plates, have been added. We believe for the purpose, it is the very best machine sold. It is simple in construction, easily operated, and will last a lifetime. Price, $1.00. Extra Plates for Danzenbaker, Ideal, and regular sections, 20 cents each.

Ask your dealer for these Machines.

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Medina, Ohio, U.S.A.

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Nat'l Bee-Keepers' Convention at Los Angeles, Aug. 18-20

AMERICAN BEE JOURNAL

43d Year. CHICAGO, ILL., JUNE 25, 1903. No. 26.

WEEKLY

THE LATE
RUFUS TOUCHTON, OF VENTURA CO., CALIF.
(See page 404.)

THE AMERICAN BEE JOURNAL

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DEPT. EDITORS,

Dr. C. C. Miller, E. E. Hasty, Emma M. Wilson

IMPORTANT NOTICES.

The Subscription Price of this Journal is $1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

The Wrapper-Label Date of this paper indicates the end of the month to which your subscription is paid. For instance, "dec03" on your label shows that it is paid to the end of December, 1903.

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Advertising Rates will be given upon application.

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Objects of the Association:

1st.—To promote the interests of its members.
2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

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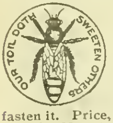
☞ If more convenient, Dues may be sent to the Secretary, at the office of the American Bee Journal.

A Celluloid Queen-Button is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-lapel. It often serves to introduce the subject of honey, and frequently leads to a sale.


OUR TOIL DOTH SWEETEN OTHERS

The picture shown herewith is a reproduction of a motto queen-button that we are furnishing to bee-keepers. It has a pin on the underside to fasten it. Price, by mail, 6 cents; two for 10c; or 6 for 25 cents. Send all orders to the office of the American Bee Journal.

Dr. Miller's New Book

SENT BY RETURN MAIL.

The book contains 328 pages, is bound in handsome cloth, with gold letters and design; it is printed on best book-paper, and illustrated with over 100 beautiful original half-tone pictures, taken by Dr. Miller himself. It is unique in this regard.

The first few pages of the new book are devoted to an interesting biographical sketch of Dr. Miller, telling how he happened to get into bee-keeping. Seventeen years ago he wrote a small book, called "A Year Among the Bees," but that little work has been out of print for a number of years. While some of the matter used in the former book is found in the new one, it all reads like a good new story of successful bee-keeping by one of the masters, and shows in minutest detail just how Dr. Miller does things with bees.

HOW TO GET A COPY OF DR. MILLER'S "FORTY YEARS AMONG THE BEES."

The price of this new book is $1.00, post-paid; or, if taken with the WEEKLY **American Bee Journal** for one year, BOTH will be sent for $1.75.

Or, any present regular subscriber to the American Bee Journal whose subscription is paid in advance, can have a copy of Dr. Miller's new book *free as a premium* for sending us **Two New Subscribers** to the Bee Journal for one year with $2.00. This is a magnificent offer, and should be taken advantage of at once. For many of our readers it is not only an easy way to earn a copy of the book, but at the same time they will be helping to extend the subscription list of the old American Bee Journal, and thus aiding also in spreading the best kind of apicultural information among those who would be successful bee-keepers.

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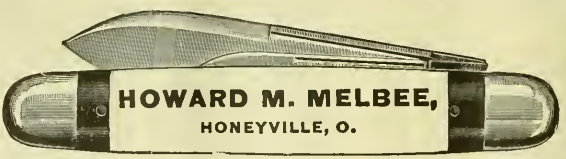
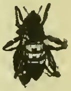
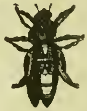
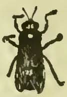
The Novelty Pocket-Knife.

Your Name and Address on one side—Three Bees on the other side.









[This Cut is the Full Size of the Knife.]

Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the subscriber, and on the other side pictures of a Queen, Drone, and Worker, as shown here.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a last-time, with proper usage.

Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the "Novelty" is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the "Novelties," your POCKET-KNIFE will serve as an identifier; and in case of death, your relatives will at once be notified of the accident.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid for $1.25, or give it as a Premium to the one sending us THREE NEW SUBSCRIBERS to the Bee Journal (with $3.00.) We will club the Novelty Knife and the Bee Journal for one year, both for $1.90.

GEORGE W. YORK & CO. Chicago, Ill.

☞ Please allow about two weeks for your knife order to be filled.

ESTABLISHT IN 1861

AMERICAN BEE JOURNAL

THE OLDEST BEE-PAPER IN AMERICA

43d YEAR. CHICAGO, ILL., JUNE 25, 1903. No. 26.

Editorial Comments

Soap to Remove Propolis.—Editor Hutchinson is enthusiastic over the discovery of a soap called Lava soap, that is very effective in removing propolis from the fingers.

Formalin, frequently spoken of nowadays as a disinfectant of combs affected with foul brood, is the name of a particular preparation of formaldehyde. The name *formalin* is the property of the Schering Chemical Works, of Berlin, Germany, protected by United States and foreign patents, and is applied to a guaranteed 40 percent solution of formaldehyde; so that when "formalin" is bought, one may feel sure of a reliable article of a given strength.

Start Queen-Cells in Full Colonies.—Although by proper management the experienced queen-breeder may be able to have good queen-cells started in miniature colonies, the average beginner will do well to make it a rule to have all queen-cells started in full colonies. A single frame of brood with enough bees to cover, or partially cover it, may succeed in rearing a queen, but such queens would not generally be accepted as a gift by the experienced bee-keeper. Cells started in a full colony are none too good for him.

Young Queens and Swarming.—It was formerly held that if a colony had a queen of the current year's rearing, there would be no danger of swarming that season. After the introduction of Italian bees, whether it was the difference in bees or difference in treatment, it was found that the rule was not reliable. It is true, however, that there is less tendency to swarming with young queens, and it has been held by many that a colony with a queen of the current year would not swarm if the young queen had been reared in that hive. Even to this, however, exceptions have been reported.

A Case of Long Caging.—M. A. Gill reports in the Bee-Keepers' Review a case in which a queen was caged in a nucleus from about the middle of July till the 10th of October. She was then released, found laying on the third day, and proved to be a prolific queen. A confinement of 12 weeks in which the queen did not lay is a pretty strong argument in opposition to those who say that a queen is seriously injured by ceasing to lay for a few days. It also militates against the view that it is important that a queen should be allowed to lay to the fullest possible extent during the first year of her life.

Untwisting that Twist.—A friend who is solicitous for the harmony of the force upon the Bee Journal, writes:

> "There seems danger of the editors of the 'Old Reliable' getting twisted up into a snarl over that twisting of the hive-cover, as appears in the closing words of our sprightly Afterthinker, page 362. Why not submit the matter to arbitration, and let me be chairman of the arbitration committee? I should rule that both are right.
>
> "On page 276 the supposition is that a cleat is on the end of the board, that cleat so rigid that it does not in the least swerve from a straight line. Now, suppose that 28-inch board twists so that while one end of the cleat rests on the hive the other end is raised, making at the middle a crack of a quarter of an inch. It is clear that the crack at the end of the cleat will be just twice as much, or ½ inch. But on page 362 no such rigid cleat is supposed. The end of the board is cleated so feebly that the end of the board is allowed to twist at its will, and instead of remaining in a straight line it will form a curve, and the quarter of an inch at the middle may become more than an inch at the end. See?"

There is no need of anxiety lest there be strained relations among the workers on this periodical. Rather than any hard feelings, either side would be willing to concede any kind of a cleat, or no cleat at all. But it appears quite clear that we may look from different standpoints.

Don't Start Queen-Cells in a Time of Dearth.—To get the best kind of queen-cells conditions should be as encouraging as possible. The fact of queenlessness is all the discouragement the bees ought to be called on to endure. When bees start preparations for swarming, if the weather turns bad so that no nectar can be gathered, the probability is that preparations for swarming will cease, and the incipient cells be torn down. Don't try to have cells reared at a time when bees would be discouraged from swarming. If, however, there be no nectar coming in, while the weather is at the same time favorable, the lack of forage may be helped by feeding thin syrup every night or every other night.

Non-Swarming Chamber.—The Simmins plan of preventing swarming by allowing constant opportunity for building comb below the brood-nest has been considerably in vogue in England, although for some reason no great success has been reported with it in this country. A non-swarming chamber is thus referred to by the British Bee Journal:

> The non-swarming chamber is placed below the body-box primarily to give the bees room and occupation in comb-building, but when they have got started well at work the extra chamber, bees and all, is removed and placed above the brood-nest, when it becomes the surplus chamber for honey-storing; and by providing plenty of storage-room overhead in this way swarming is prevented.

One Way of Starting Queen-Cells.—The novice is likely to feel that the matter of rearing queens is so difficult that he dare not undertake it. Although other ways may be better for the professional queen-rearer, here is a way by which the veriest tyro may rear a few queens of particular stock and of good quality:

> Look through your choice colony till you find the queen. Take the frame of brood on which you find her with its adhering bees, and put it, queen and all, in an empty hive, and add to it from the same colony another frame of brood and bees. That's all; the bees will do the rest. You have simply made the colony queenless, and the bees will proceed to rear a number of queen-cells that under proper conditions will be as good as the best. In nine days from the removal of the queen the cells may be cut out and used wherever desired.

A Busy Bee-Keeper!—The other day we received the following from one of our subscribers:

> "Please stop the American Bee Journal, as I can not get time to open them, let alone to read them."

We may be wrong about it, but we think that any bee-keeper who is too busy to read his bee-paper is altogether too busy to fool with bees any at all. We can not see how a bee-keeper can put an hour or two each week to any better advantage than reading a bee-paper—that is, if he cares anything about making a success with bees. Sometimes a single item or article in any of the bee-papers is worth more than the subscription price for 10 years. Of course, we mean it is worth that if it is put into use by any live, up-to-date bee-keeper.

The fact is, that nearly all of us can find time to do whatever we really want to do. And it is truly so of the busy man—no matter how busy he is, he can always find time to do one thing more. It is usually the lazy, poky fellow who never has time for anything; and he is generally not asked to do anything, because those who know him best know that he never gets anything done.

Cure for Bee-Paralysis.—Many cures for bee-paralysis have been given, their authors confident of their efficacy, but upon further trial success did not follow. One reason for confidence in cures that do not cure is that frequently the disease disappears of itself, and then whatever remedy was last tried has the credit for the cure. In the hope that something, some time, may prove successful, it is well to give new remedies as they are offered. Here is one given in Gleanings in Bee-Culture:

> I dug a ditch six inches wide and three inches deep in front of this hive, the ditch extending around to the sides of the hive. It is necessary for the hive to stand very close to the ground. The healthy bees will drag the diseased ones out and fall into this ditch, and have to leave the sick bee there, for it can't fly out; and all the sick bees that crawl out of their own accord will fall into this pit and can't get out, so you have these diseased bees trapped. I go out every evening and take up these dead bees, and burn them, destroying the disease-germ, hence I effect a cure. I have tried this remedy several years, and have never failed yet to cure a colony thus treated; in fact, I would not be in the bee-business to-day if I had not discovered this remedy. It usually takes about ten days to effect a cure.

Association Notes

Mr. J. Q. Smith, of Lincoln, Ill., has been appointed as Inspector of Apiaries for Illinois, as will be seen by the following:

> Route 4, Springfield, Ill., June 19, 1903.
>
> Editor American Bee Journal:—The Illinois State Bee-Keepers' Association met yesterday (June 18) at the State House, for the purpose of naming a foul brood inspector for two years, to carry out the provisions of the late Act of the Legislature. Mr. J. Q. Smith, of Lincoln, Ill., was chosen as such inspector.
>
> It was the voice of the meeting that while the Act was in favor of the State Bee-Keepers' Association, all bee-keepers whose bees are affected with foul brood should have the attention of the inspector free of charge to them, except his entertainment; but that those who become members of the State Association should have the preference. It was also the voice of the members present, that those who became members by paying their fee of $1.00 to the Secretary, would secure also a membership in the National Association for one year.
>
> Jas. A. Stone, *Sec.*

Now, those whose bees are diseased can call on Mr. Smith any time after July 1st, the date when the law goes into effect.

Every bee-keeper in Illinois should send his dollar to Secretary Stone at once, so as to get in line for the State Inspector in case he is needed. The same dollar will also pay a year's membership in the National. Better join at once, if not now a member of the State Association.

The National Convention in California.—Editor Root is quite enthusiastic about the matter. Having been over the ground embraced in the trip, he knows what he is talking about. He says in Gleanings in Bee-Culture:

> It was suggested that we make the Santa Fe route the semi-official one of the bee-keepers. A tourist sleeping-car could be made up largely of bee-keepers, to start from Chicago in time to give a day's stop-off at the Grand Canyon—probably the most remarkable scenery of the kind the world affords. The train is then to go on to Los Angeles, fitly named the "City of the Angels," one of the most delightful cities I have ever visited. It is not delightful because of its architecture, but because of the surrounding scenery and its bracing climate. Cool evenings and warm days make living there most enjoyable.
>
> Board and lodging can be secured at very reasonable rates. In one of the good hotels of the city I secured a room at 25 cents a night, and board at 25 cents a meal, and the very best. There were other places where I could have had accommodations still cheaper. The bee-keepers there are a most hospitable set of fellows, and I shall not forget some of the pleasant hours spent with some of them.
>
> This is a good year for California; and if one desires to see the real extent of bee-keeping possibilities in one of the fairest climes the world affords, let him take this trip. Do not go simply because you may get enough at the convention to pay you, but because your horizon of life will be enlarged, and years afterward, you can live over again (in memory) one of the most delightful trips you ever took. Just think of it! You can take a car in the morning in Los Angeles, and go to the coast and take a sea-bath. You can then come back to Los Angeles and eat strawberries and pick roses. In the afternoon you can go to Pasadena, a little city that is even more beautiful and more perfectly laid out than Los Angeles, where the great wealth of the East has been poured. Indeed, it is almost a heaven on earth. An hour's ride will take you up into the mountains, where you can get above the clouds—yes, may take a sleighride and enjoy a good snowballing. Just think of it! a sea-bath in the morning, strawberries and roses at noon, a sleighride above the clouds, and snowballing, *all in one day!* Talk about going "from the sublime to the ridiculous!" This beats anything for a rapid change of season and scenery. While this is possible in the spring of the year, it may not be possible in August.
>
> But one of the most thrilling trolley-rides (dangerously near precipices) that can be imagined is to take an electric car and actually glide above the clouds and look down upon the valley spread out like a panorama thousands of feet below. One can see the ocean, and the cities of Pasadena and Los Angeles, and all the small outlying towns, with their fine orange-groves and all the beautiful luxuriance of a tropical climate. In short, he can see typical Southern California.
>
> Bee-keepers, if you fail to take in a trip of this kind (and it is the opportunity of a lifetime) you will be missing one of life's greatest pleasures.

The Sparta, Mich., ordinance, referred to last week, which declared bees in that city a nuisance, and that they must be removed on or before May 10, was finally dropped. As soon as Mr. France learned that the ordinance was to be passed, he sent the city authorities and others plenty of literature, and letters pleading for the members who were threatened. As soon as the ordinance was passed, Mr. France sent Pres. Hutchinson to investigate the case, and settle, if possible. He went, but could not then get settlement. A trial was arranged for, and when the city of Sparta went to Detroit to secure legal aid, they learned that the National Association had already engaged one of Michigan's best attorneys. The city officials of Sparta then returned and dropped the case, which was much to their credit. Another victory was thus gained for the National Association.

As reported before, there are now over 1200 members in the Association. In view of the excellent things (the above is an illustration) it is doing for its members and bee-keepers in general, the membership list should be doubled before fall. "In union there is strength."

Each bee-keeper should feel the necessity of standing by all other bee-keepers. Only by so doing can the rights of each and all be maintained.

Sketches of Beedomites

RUFUS TOUCHTON.

Mr. Rufus Touchton was for many years a prominent bee-keeper of Ventura Co., Calif. He died Oct. 9, 1902, after a weary struggle against the grim destroyer, Death. The local newspaper, published where he lived, said that his was an upright, conscientious life, ever performing the duties set before him, in domestic and public relations, in a manner that won him hosts of friends and the admiration of all. As one of the Supervisors of the county he served his constituents in an efficient manner. He was always a strong temperance man, and in anti-saloon contentions he stood faithfully by his own convictions and the promises he had made to his people.

Mr. Touchton was a native of Maryland, having been born in Havre de Grace in 1852. He went to California in 1875, and located near Santa Paula. He engaged in bee-keeping and honey-production, and was considered one of the best apiarists in that State.

In 1894 Mr. Touchton was elected Justice of the Peace in Santa Paula, and served four years. In 1898 he was chosen Supervisor from his district.

A large concourse of people attended the funeral services, thus showing their esteem for their departed friend and neighbor.

The foregoing biographical notes were furnished us by Jno. G. Corey, a venerable bee-keeper of the locality in which Mr. Touchton resided so long. This short sketch should have appeared long ago, but was not furnished us until early this year, and has been overlooked.

Convention Proceedings

Chicago-Northwestern Convention.

Report of the Chicago-Northwestern Bee-Keepers' Convention, held in Chicago, Dec. 3 and 4, 1902.

BY OUR OWN SHORTHAND REPORTER.

(Continued from page 391.)

Pres. York—We have spent a good deal of time on this subject, and Mr. Moore has an article somewhat along this same line. After he has read it, we will take up the question-box. We will now listen to Mr. Moore:

THE FUTURE OF THE NATIONAL, AND THE DUTY OF AFFILIATED ASSOCIATIONS.

The future of the National Bee-Keepers' Association is a theme that is of interest to all of us. Two years ago we raised the war-cry of "1000 members for the National!" and now we have it. Let us, here and now, in this Great City, at the center of population and energy for the Great West, raise high the cry "10,000 members for the National!"

And shall we not have it? Is there any impossibility inherent in this high aim? Let us consider for awhile a few phases of the question.

The United States Department of Agriculture reported that in this country there are over 700,000 who are engaged in apiculture on a large or small scale.

The bee-hive factories and supply dealers are sending out their catalogs to from 150,000 to 200,000 different addresses.

The bee-periodicals have about 25,000 paid subscribers.

Is there anything impossible or wonderful in an association of *10,000 members* from this host of over half a million strong.

So it is settled that we are to have 10,000 members in our National organization in the near future. The Good Book says, "According to your faith be it unto you;" and our faith is more than equal to this height.

We shall proceed to mention a few of the steps up to the full realization of high ideals.

First, at the election for General Manager held this month, let us elect to this high office *the best man* in our ranks, regardless of location, controversies, or any other disturbing element that may seem to complicate the situation. The only one thing that should be considered is, Who will serve the National best, and lead her up to the highest points of success and influence? Then having recorded the will of the majority, let our whole 1000 officers and members go forward in the New Year, resolved to put petty differences and jealousies behind them, and work for great things for the bee-keeping world.

Publicity and promotion are, in any business enterprise, of first importance. At the World's Fair held in our city in 1893, Moses P. Handy was employed at a salary of about $10,000 a year, and his sole function was to let the world in all languages know what we were doing and proposed to do at Chicago. No doubt the Great Fair would have been a failure without the Bureau of Publicity and Promotion.

We are now in the 20th Century, and 20th Century methods must prevail.

Our opportunities are great, our field of usefulness is large—wide as the Nation.

We must succeed grandly, or disgracefully fail; there is no middle ground.

We must have our "Bureau of Publicity and Promotion" if we are to achieve great things.

Let every bee-paper in the land run a column in every issue, headed, "What the National is Doing." Let the officers, especially the General Manager, be responsible for the supply of copy to every bee-paper in America, small and large.

In the opinion of the writer, hundreds are waiting to see the National *do* things, before putting in their dollars to help.

You can see by the quantity of material submitted in the annual report what a large amount of readable copy could be made, and the skeptics would be speedily convinced that the National was *doing things*, and could also be trusted to *do more* in the future.

Therefore, let the National advertise, and advertise largely, and I venture to say that no bee-paper in the land would render a bill for space.

The National Association must in the future rise to a sense of its responsibilities and privileges as never before. It must look forward, and up, to plans and aims that may seem now out of reach.

In nearly every State in the Union laws are made to protect the interests of bee-keepers. It takes lots of money to influence legislation.

Look at Illinois. No foul brood law; no spraying-in-fruit-bloom law. It is distinctly one of the functions of a National organization to get laws that are needed by bee-keepers passed in all the States.

An Association of 5000 to 10,000 members, and having the power to levy assessments for proper objects, can raise all the funds necessary to put needed laws on the statute books in every State.

I am no prophet, nor even the son of one, but I venture that there will be no lack of members and money to accomplish any lawful end, when bee-keepers all over the land realize that the National is going to do things on a scale commensurate with the size and wealth of our beloved country.

One of the laws greatly needed is a law of Congress forbidding the use of the word "Honey" on anything except *real honey gathered by honey-bees*.

Right here I want to whisper that this is a land and an age of majorities, and *if you wish to lead* it is wise to take your hat in hand, and say to the great body of the plain people, who finally settle everything in this country, "Sirs, what are your wishes?"

I will pass along to my next head:

THE DUTY OF AFFILIATED ASSOCIATIONS.

This was one of the greatest and wisest laws ever passed by our governing body, allowing any association to join in a body at half price. This has helped to the 1000 mark. Our General Manager will confer a favor on us all by giving the total of members affiliated in this way since the law was passed.

Let us not think that our duty is done when we pay our dollar. Every member must have and feel a personal interest in the work of the National. Any General Manager will welcome letters from the members with suggestions as to any phase of our work.

Let us talk up the National to our bee-keeping friends. Urge them to send in their dollar right away. Tell them they never know when trouble may come, and then it is too late.

Suppose every one of our 1000 should be a committee of one to get new members, does any one doubt that we could average two new members for each old member? and lo, we have 3000 members! Next year we have 27,000 members.

How important it is to get the membership aroused to action. No one person can do it all, but "united we stand," and nothing is impossible for us. No argument is necessary to prove that all questions are safe in the hands of the people, and sure to be decided rightly, if the majority really speaks. Therefore, let all affiliated associations send in to the General Manager nominations for all offices in the gift of the Association.

I need hardly mention as one of our duties, to join promptly again on expiration of membership, and remit promptly for the same. For only with the "sinews of war" can we do battle for the right and the interests of bee-keepers.

HERMAN F. MOORE.

WINTERING BEES ON HONEY-DEW.

"Having nothing but a crop of honey-dew, how can I winter my bees on it?"

Dr. Miller—The first thing to know is whether that honey-dew is of the kind that kills bees. In some places they winter successfully on it. If the questioner has had experience with it he will know.

Pres. York—He can probably tell better next spring.

Dr. Miller—He may have tried in past years.

Mr. Wilcox—I had a very little experience with it, but I am rather inclined to the opinion that something can be done toward helping it by feeding sugar syrup. When that brood hatches out, feed sugar enough until they care for themselves, and they will get through the winter.

Mr. Watts—Some seven or eight years ago this occurred to me: I had 120 colonies of bees all in strong condition. That season they gathered nothing but honey-dew, the first I ever experienced. Not being experienced at that time I didn't know what to do. I couldn't sell the honey, and couldn't do anything with it, and I told my wife we were going to lose all our bees. She laughed at me; but winter came on; the bees were on the summer stands; I left a lot of the surplus on the hives, but it was no use, in the spring my bees were all dead except two colonies. I lost the whole apiary. About three years ago we got another honey-dew crop, of a mild form. I sold that honey and the bees all died. I am afraid something will occur again, and I have no remedy.

Dr. Miller—I believe I would give them some syrup with the idea that they will take that first, and what they put in last they are likely to use first, and you will at least stand a better chance by having them use part of the sugar syrup.

Mr. Watts—Isn't it too late now to give them sugar syrup?

Dr. Miller—I should say ordinarily yes, decidedly. No sane man ought to give sugar syrup now, but in case of their being filled up with poison, I would run the chance of keeping them on that food.

Dr. Nussle—I would use one-tenth part of honey with the sugar syrup, if I had to import it from a neighboring State.

Mr. Abbott—If you have honey-dew you needn't run any risk feeding sugar syrup. Get granulated sugar and make a cake, and put it over the cluster, and my word for it, the bees won't eat anything else until that sugar is all gone. There is no reason why any bee should be fed syrup this time of the year. It surprises me that more isn't made out of this idea of feeding a sugar-cake. Five pounds of sugar will run any colony of bees through the cold weather that we have in Missouri, and which lasts during January. It is perfectly safe, easily made, and easily fed.

Dr. Miller—I want to accept the amendment. I hadn't thought of that. Mr. Abbott always has the cake of sugar with him "in his head." I don't. I ought to have had it.

Pres. York—Will Mr. Abbott please explain how they make the cakes of sugar for bees in Missouri?

Mr. Abbott—We simply get the best grade of granulated sugar and put just as little water in it as we can to make a liquid out of it in stirring up, then boil carefully, being careful not to burn it. My wife does it. She is the cook at our house. I used to cook, but I quit since I got married. She takes a little of it and drops it in cold water, and when it grains it is time to pour it out. Pour it into broad pans and make it about 1½ inches thick; and as she pours it in she stirs it a little, and that leaves little crevices that the bees can work into. I like it in the sugar form a little better. Then I put some sticks right over the cluster in January, and lay the cake on that, and put a canvas or something like that—something so there is no upper draft—and I have wintered a good many colonies without any honey of any sort, or anything to eat except that sugar. They will eat right through it, and the inside out of it, and sometimes leave a little, thin rim around it.

Mr. Wilcox—If you use crushed sugar mixed with honey and knead it to get the right consistency, wouldn't that answer just as well?

Mr. Abbott—It would answer until it run down over the bees.

IMPROVING BEE-PASTURE.

"How can I improve my bee-pasture?"

Dr. Miller—Sow sweet clover and catnip.

Mr. Wilcox—We have improved our honey-pasture wonderfully by sowing alsike clover. The farmers sowed it for the seed and found it profitable, and it is equally profitable for the bees.

Dr. Miller—Will alfalfa yield honey where you live?

Mr. Abbott—Yes, sir.

Dr. Miller—It doesn't in this locality.

Mr. Abbott—This must be a funny country.

Dr. Miller—I have been making inquiries for several years about it. Which side of the Missouri River do you live?

Mr. Abbott—I live on this side.

Dr. Miller—It is the first case yet reported that I have heard that alfalfa was sown along the Missouri River. I have been looking for this. They are telling us now at the experiment stations that we can have alfalfa grow and succeed in the State of Illinois by inoculating some of the soil, and I have been looking for that time to come.

Mr. Johnson—This is the plan that I have formed for the coming season: I went around to the neighbors and agreed to supply them with one to five pounds of alfalfa seed at 25 cents a pound, and supply a small amount of inoculated soil. I can get it from the West from an uncle of mine. They are anxious to have it, and I see no reason why it shouldn't grow. I sowed one alfalfa patch. It takes about three years before it does anything, but it finally did well. I think it developed the germs itself. I think any alfalfa would finally develop those tubercles. Alfalfa is a clover, and in the different seasons it will yield here as well as anywhere. Sweet clover was a failure on account of being too wet.

Dr. Miller—Did you have your bees working on it?

Mr. Johnson—No. I did not.

Mr. McQueen—I have a patch of the alfalfa about half way to Elgin, and the bees worked strong this year. They did nothing with it last year.

Mr. Green—I am afraid Dr. Miller has not been reading his bee-paper thoroughly. There was a report from South Carolina of bees working very heavily on alfalfa there, but it was said they did not work the first year it bloomed.

Mr. Hutchinson—Is your patch on high or low ground, Mr. Johnson?

Mr. Johnson—It is not on low ground. It is on the side of a hill.

A Member—Alfalfa has to have well-drained ground. It has to have ground where water doesn't stand, ground where the rain can penetrate. It doesn't do well on heavy clay. On clover ground it will give honey in this country. I am going to try it next year.

Mr. Johnson—Nobody has tried alfalfa in this part of the country long enough—haven't had it long enough to decide that it doesn't produce honey. It takes a long while. It is on account of the bacteria, and I believe it will develop bacteria itself, and then it will produce honey.

Dr. Miller—I shall be glad to believe that. What about wild cucumber as a honey-plant?

Mr. Hutchinson—Bees don't work on it in this part of the country. I haven't seen a single bee on it.

Mr. Green—I watched them two years and saw only a couple, and they were gathering pollen.

Mr. Hutchinson—Near Dr. Gandy, in Nebraska, they get large crops of cucumber honey.

Dr. Miller—Is that the same thing?

Mr. Hutchinson—I don't know.

Dr. Miller—As I understand it, the kind of wild cucumber we are talking about, the sack is about as large as a butternut. There is a plant that the bees work on that looks like wild cucumber. We may be talking about different things. This pod, the seed is not like this at all. It is larger a good deal than this, the kind of wild cucumber we are talking about. There are only two seeds inside the pod, and they drop out and the cucumber dries up. We are talking about two different things.

PREVENTING PROPOLIS ON THE HANDS.

"While extracting how can I prevent propolis on my hands?"

Pres. York—Some one might suggest wearing mittens!

Mr. Wheeler—Wash your hands in kerosene.

Pres. York—The question is, How can I prevent?

Mr. Wheeler—Let some one else do the work.

Mr. Moore—Don't keep bees.

Mr. Abbott—You can prevent that sticking to your hands by oiling with sweet-oil, or something of that kind. I always oiled my hands before I began work.

Dr. Nussle—Oil or glycerine will prevent it from sticking to the hands to a great extent.

Mr. Wheeler—You can take it off very quickly with kerosene.

(Continued next week.)

Honey as a Health-Food is the name of a 16-page leaflet (3½x6 inches) which is designed to help increase the demand and sale of honey. The first part is devoted to a consideration of "Honey as Food," written by Dr. C. C. Miller. The last part contains "Honey-Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by every one who has honey for sale. It is almost certain to make good customers for honey. We know, for we are using it ourselves.

PRICES, prepaid—Sample for 2 cts.; 10 for 10 cts.; 25 for 20 cts.; 50 for 35 cts.; 100 for 65 cts.; 250 for $1.50; 500 for $2.75; 1000 for $5.00. If you wish your business card printed at the bottom of the front page, add 25 cts. to your order. Send all orders to the Bee Journal office.

Contributed Articles

Shaken or Forced Swarms—Questions Answered.

BY ADRIAN GETAZ.

I SHOOK a few swarms several years ago. The object I had in view was not to make swarms but to prevent them. The plan was to take all the brood out, put it on a new stand, and return it to the parent hive in five or six days.

As to preventing swarming, it was a complete success. None of the colonies thus treated offered to swarm. But the plan is otherwise objectionable, viz.:

1st. To carry it out on a large scale, it would be necessary to have a number of extra hives, which would involve a considerable cost.

2d. During the five or six days that the brood was absent, the parent colonies did nothing, or very little in the sections, but worked vigorously in the brood-chambers. And when I went to return the brood, I found the brood-chambers about half full of crooked combs, mostly drone, hanging from the supers. As a matter of fact, I expected to find some comb built in the brood-chamber, but I thought that with plenty of foundation in the supers, the bulk of the work would surely be done there. The locality, or rather the strength of the honey-flow, may have something to do with the results.

3d. The queens will go in the sections unless prevented by a honey-board. A honey-board is a nuisance, anyway, and also an expense.

4th. Some pollen was carried in the sections. I don't know how it could be prevented. The locality may have some bearing on this point.

MODERATE INCREASE.

A plan that will prevent swarming and secure a moderate increase consists in taking one comb of brood out of each colony every few days and replacing it with a comb of foundation. If the object is merely the prevention of swarming, the operation should be repeated as often as necessary, so as to furnish the queen enough room to lay. That may be as often as every fifth day, or perhaps only every tenth day, according to the size of the brood-chamber, the prolificness of the queen, the honey-flow, and other conditions.

As long as the queen has enough empty comb to lay in, there will be no swarming unless the queen is failing, or unless the lack of shade and ventilation renders the situation intolerable.

It will not do to put in an already built comb; the bees would often fill it with honey before the queen could lay in it. The reverse takes place when the foundation is given. But it is necessary even then to replace but one comb at a time, otherwise a portion of them would be filled with honey, as the queen could not lay in them fast enough to occupy them before the cells would be long enough to hold honey. I suppose that an already built comb shaved down would do as well as foundation, but I have not tried it.

Keeping in view the above experiments, I think I can answer some of the questions asked in a recent number of this paper.

WHEN TO SHAKE THE BEES.

Right here it must be remembered that a colony which will not attempt to swarm will do better if left undisturbed. The trouble is, we do not know in advance which will not swarm and which will. The plan suggests itself to watch the colonies and "shook" those that begin to prepare for swarming. The trouble is, that in order to carry out this plan, it would be necessary to inspect carefully each colony every fourth or fifth day. That is entirely too much work.

The only plans that remain are to treat all the colonies just before the swarming season, or put queen-traps on all (or clip the queen), and treat only those that actually swarm. If the locality and other conditions were such that the majority of the colonies were likely to swarm, I would advise the first plan, otherwise I would prefer the second.

COMB FOUNDATION OR WHAT?

What shall we put in the brood-chamber, foundation or drawn combs? In view of the experiments stated above, I should say, emphatically, not drawn combs, by any means. The bees would fill them with honey at once. Starters will not do. Too many drone-combs would be built. Full sheets of foundation should be given.

CONTRACTION.

This is a point on which I have no experience and can only suggest. If other people's bees do like mine did, they would work nearly altogether in the brood-chamber, rebuild it, and nearly entirely neglect the supers.

I would suggest to contract the brood-chamber to three combs, so that the majority of bees would be compelled to work in the supers. Then as soon as three combs are occupied, add one or two more; and when these are occupied, add again, and so on. It would not do to leave the brood-chamber much contracted all the time, because the swarming fever might start again.

SHALL WE LEAVE A COMB OF BROOD?

No, unless it is sealed brood. After the bees have once begun to build queen-cells, they will keep it up as long as the circumstances are favorable, and there is unsealed brood. There must be a forced interruption of some sort, either to destroy the swarming fever, or rather the queen-cell-building fever.

SHALL WE "SHOOK" OR NOT?

In my opinion, no; decidely, no. It is far better to keep the forces together than to divide. In shaking swarms, the swarm (on the new stand) cannot give any surplus. The parent colony loses the bees that are on the new stand; besides that, it has to rebuild its brood-nest. A double loss.

But can it be done? Can we keep the forces together?

Certainly we can. Cage the queens or requeen. In my locality, and with my system of management, only a small portion of my colonies swarm. The most satisfactory process with me is to let those colonies swarm that want to, return the swarms, destroy the old queens, and let them requeen out of their own cells. It is very easily done by having queen-traps on all the colonies.

A CONVENTION OF TWO.

Last winter I had a visit from Mr. Daniel Wurth, one of our best queen-breeders. It is hardly necessary to say that queen-rearing in all its aspects and details was the subject of our conversation. Mr. Wurth does not sell his queens direct to the consumers; he furnishes them through the supply-dealers. He insisted on the necessity of controlling the drones, and having drones to be good stock. He says it is not enough to Italianize the neighborhood and take the chances. His method is to put one or more drone-combs in several of his best colonies, keep them fed, and therefore have an abundance of good drones in the apiary. He says that if there are enough drones in the apiary, only an insignificant number of queens will mate elsewhere.

Among other questions, I asked him if he had darker queens in the fall than in the summer? He said he had some occasionally, not only late in the fall but also early in the spring. He thinks that the darker color may be due to the queen-cells being exposed to a too low temperature.

Knox Co., Tenn.

Rearing Queens—Methods Discussed.

BY HENRY ALLEY.

WELL, now that the umbilical-cord humbug has died a natural death, and expired just about as quickly as most people supposed it would, we can now discuss subjects of more importance to the readers of this paper.

Mr. Doolittle lays a good deal of stress upon the fact that certain things he refers to can be found in "Scientific Queen-rearing." Yes, they can. One thing he refers to is the matter of rearing queens over and behind an excluder—that is, a queen-excluder. That is in his book, no doubt; but it never got there till I published it in the columns of the American Bee Journal. Many other things may be found in "Scientific Queen-Rearing," but they did not get there until after they appeared in my first work on queen-rearing, in a book entitled "The Bee-Keepers' Handy-Book." This work, which had the largest sale of any book devoted to queen-rearing, and contained 180 pages, is now out of print.

A perusal of this work made it quite easy for several parties to write books on the subject of rearing queens.

The only difference, in the method of rearing queens, between Mr. Doolittle and myself, is that he makes artificial cell-cups, and I use only those built in the natural way by the bees themselves. Now, readers, which of the two methods, think you, is the best? In what respect do artificial cell-cups have any advantage over natural cells? Mr. Doolittle claims to follow natural laws and natural methods in rearing queens, yet he tells people to disregard natural ways and adopt unnatural principles, as they are better than the methods used by the bees themselves. What bosh!

I first gave to the world a way of having queen-cells completed above an excluder, and refer to back copies of the American Bee Journal in support of this claim. I first gave to the world a method of having queen-cells completed in the brood-nest, while a queen was present in the colony. In that latter case no excluder of any kind was used. Neither of the above systems is practical, for the simple reason that they cannot be used at all times. With the first system good work can be done while there is a good flow of honey. But even in this case, not as good queens can be reared as by another method, and that is why I discarded the entire arrangement.

If I could rear superior queens at all times, as Mr. Doolittle says he can by the excluder system, I surely would use it. I have tested the matter to my entire satisfaction.

Mr. Doolittle, if I remember correctly, made some adverse criticism on the fact that I reared good queens with a pint of bees. I had nothing whatever to do with rearing any queen with a pint of bees. The bees alone are responsible for the good work that was done. I merely took the queens from a very small hive of bees, and the queen that was introduced was destroyed, and this pint, or cupful, of bees reared a fine queen. To have been consistent with the ways some people do business, I ought to have destroyed that large, fine and beautiful queen because she was not reared in a 16-frame hive by a bushel of bees. Who says a cupful of bees won't rear a grand queen? Let's see:

In the American Bee Journal of May 4, Mr. Doolittle stated that he had a colony that built 174 queen-cells. Whew! Wasn't that a lot? Now let us dive into mathematics a little and see about how many bees by measure it took to rear those 174 queen-cells, or queens, as the case may have been. Now, at the rate of one pint of bees to a cell there would have been 87 quarts of bees. That is 2½ bushels and 7 quarts of bees in all. Did any one ever see a colony of bees that would measure 2½ bushels? Well, let's call it a cupful of bees and a queen. That would have made in measure a half pint of bees per cell. How many bee-keepers ever saw a colony of bees that contained 87½ pints of bees. Now, why criticise my statement that a cupful of bees built a queen-cell and produced a superior queen? Does not Mr. Doolittle's statement fully confirm my claim that a cupful of bees will rear a good queen? But I do not believe there were three good, or fairly good queens produced in those 174 cells.

What does Nature do in rearing-queens? Do bees build half a hundred cells when they cast a swarm? No, not on an average over 12 cells, and hardly ever over 8 cells; that has been my experience.

Mr. Doolittle in a recent article shows where his bees did better than mine. I really think I could fill this entire volume of the American Bee Journal in showing that my bees did better then any other bees on earth. In all my catalogs, in which I gave testimonials of my bees in competition with others, I always omitted the names of the other dealer—never considered it fair to call names in such cases. I know there are always good reasons why some bees do better than others, and it is not always the fault of the bees, either. We all know that. Here is a case for the reader to consider:

A bee-man in Ayer, Mass., Italianized his apiary of 14 colonies. The bees bred up well, were very handsome and all the hives were full of bees. The dealer from whom those queens were obtained advertised the best strain of Italians on earth. But these bees never would work in the sections. and barely got a living. He sent for me to come for the bees. When I had looked them over, I said: "How much do you want for the lot? His reply was: "Take them out of the yard." He said they were worthless and I could have them for nothing. Well, they were *worthless*, as honey-gatherers. But I destroyed the queens and bred the bees for forming nuclei.

Now, the fact that these queens were extra-prolific showed that the trouble was not in the breeding, but in the strain of bees.

Now, Mr. Doolittle and myself have sent out queens that were no better than the above, but in my case it was in the strain and not in breeding that caused the trouble. Mr. Doolittle is criticising me for the same things he is guilty of himself. Sometimes a strain of bees does not prove to be what they gave promise of. But we all do the best we can. I always try to beat the other fellow in the production of the best bees and queens. The other fellow tries to beat me. We are all in the same boat.

Mr. Doolittle, why do you say your queens are better than mine? Dr. Gallup, your old teacher in queen-rearing, and a man in whom you take, or took, a good deal of stock, says your queens are no better than mine. He said it, didn't he, and no longer ago than last winter, in the American Bee Journal? Now, Mr. Doolittle, you would better go slow on this point, as I can show as many letters condemning your queens as you can against my queens.

A few words more and I am done this time. Mr. Doolittle has published to the world his method of rearing queens. I have done the same thing, antedating Mr. Doolittle a long time. I do not believe in hiding light under a bushel.

Now I will tell the readers of this journal how I rear queens, or rather how I produce queen-cells and have them completed. When I have eggs about ready to start queen-cell building, I select one of the strongest colonies of bees in my apiary to do the cell-cup building. This colony is taken into the bee-room, the combs all removed and the bees brushed from them into the cap of a bee-hive. I do this in such a way that the bees stay in the box till I find the queen, which is not long, I can assure you. When the queen is found the bees are then put into a box having a wire top and bottom. The top is the cover. The bees are right in this condition for a few hours. In the course of an hour they miss their queen, and a few hours later they are supplied with eggs and cell-building is at once commencd. The bees will construct as many cell-cups as eggs are given them.

In the course of 24 to 36 hours these cell-cups are divided among several of the strongest colonies in the yard. The queens from the full colonies are first removed say 12 hours before the cell-cups are placed in the hives. Now, I do not put these cell-cups behind nor over a queen-excluder. A comb is removed from the brood-nest and the cells placed between two frames of solid brood. Here they are left until completed, which is three days later. By this method there are two sets of bees working on each set or batch of cells. The cells built in this way produce queens superior to any I ever reared by any other system.

Does any reader of this paper know of a better system of rearing queen-bees? Do you, Mr. Doolittle, know of any that compares with it? If you rear good queens by your present method, you can rear much better ones by the one given above.

I have been accused of rearing queens by the nucleus system. Does any man who rears queens thus see any nucleus system in the above? The first year I reared queens, when I was not selling queens, I reared by the nucleus system. Bear in mind, I only reared queens in three days for amusement, and not for sale. I reared good queens. all the same.

Essex Co., Mass., May 14.

Winter Ventilation and Porous Coverings—Some "Whys" About Them.

BY ARTHUR C. MILLER.

On page 137, Mr. Hasty hesitates to give Mr. Holtermann's theories on porous coverings full endorsement. Mr. Hasty does well to qualify his support, and I hope to show that his doubt is well founded, and that Mr. Holtermann's theory is erroneous, not because it is his theory, for it is not his alone, but because the truth is otherwise.

During the winter, when bee-life is maintained at a minimun of exertion or visible activity, ventilation by fanning is unnecessary, and is not resorted to except under certain conditions, and then generally only at considerable intervals. But the air is steadily and constantly changing in the hive, whether the latter be a thin box or a thick chaff hive. This is due to two causes—the cooling of warmed air, and the development of carbonic-acid gas.

The normal temperature of the winter cluster of bees is 65 degrees F. The warmed air in and about this cluster slowly rises, spreads out over the top of the chamber, chills, settles and passes out the hive-entrance, other air drawing in to take its place.

Place a smoker containing a small and slow fire in an empty hive, replace the cover, and we have a visible though crude illustration of the air-currents created by the bee-cluster.

Regarding the production and movement of carbonic-acid gas, I cannot do better than quote from Cheshire, condensing part and quoting part literally:

"During periods between visible feeding the bees are actually feeding upon the store of honey taken into the honey-sac, where it is held till appetite needs appeasing." The digested food passes into the circulation, is oxidized by the air breathed, and heat is involved. "A supply of fresh air to the cluster is clearly essential, for as the heat is in proportion to the honey consumed, so it is in proportion to the products of oxidation—the noxious gas (carbonic acid) and the water—as a reference to the following table will show, in which all but the main constituents of the honey have been disregarded for simplicity's sake.

$$24 \text{ oz. honey} \begin{cases} 9 \text{ oz. water} = 9 \text{ oz. water.} \\ 6 \text{ oz. carbon} = 6 \text{ oz. carbon.} \\ \left.\begin{array}{l} 8 \text{ oz. oxygen} \\ 10 \text{ oz. hydrogen} \end{array}\right\} = 9 \text{ oz. water} \end{cases}$$

"The 6 ounces of carbon being united with 16 ounces of oxygen from the air, we obtain 22 ounces of carbonic-acid gas, which, with the 18 ounce of water, are thrown into the air of the hive by the consumption of 24 ounces of honey."

"Let us trace the 22 ounces of carbonic-acid gas, occupying about 12 cubic feet at ordinary temperature. Dealing with a colony wintered on seven standard frames (the equivalent of 6 Langstroth frames), set 1⅝ inches from center to center, we find:

Seven frames, each 8½ cubic inches wood	= 59½	cubic inches.
20 lbs. honey, specific gravity 1.386	=400	“ “
1½ lbs. wax “ “ .965	= 43	“ “
Pollen, estimated	= 20	“ “
Bees	=100	“ “
	622½	“ “

"Disregarding fractions, this, substracted from 1,500 inches (the solid contents of the hive) gives 878 inches, i. e., an air-space which we may for simplicity's sake regard as half a cubic foot, or 864 cubic inches. Therefore 12 cubic feet of carbonic-acid gas produced from the consumption of 1½ lbs. of honey, would fill the air-space in the hive twenty-four times. Nor is this all. Air is only one-fifth—by measure—oxygen, the other four-fifths being nitrogen; and carbonic acid occupies precisely the same space as the oxygen, which unites with the carbon to produce it. Therefore, if the whole of the oxygen introduced had been converted into carbonic acid, the air in the hive must have been entirely renewed 24x5=120 times; and further the presence of carbonic acid is so deleterious that 5 percent only of the oxygen could be utilized; the proportion being also limited by the laws of gaseous diffusion (interchange) in the breathing-tubes of the insect. Thus it is impossible to resist the conclusions that 1½ lbs. of honey cannot be oxidized for heat-production without the air of the hive being changed 2400 times."

"Authorities, with unusual agreement, state that the loss in weight of a wintering colony, in which breeding is suspended, is less than 2 pounds per month. With ordinary protection, this is about accurate, but it may be rather less than 1 lb. per month, or about ½ ounce daily. The 1½ lbs. would therefore represent 48 day's rations, and make the daily essential number of renewals of the air-volume of the hive to equal 2400 divided by 48 equals 50; i. e., the air of the hive, even during this very restricted food-consumption, would need to be changed completely during every 30 minutes.

To what extent such a change could take place through chaff packing or unpainted walls may readily be guessed.

As further evidence that no upward or lateral ventilation is necessary, either to rid the hive of its moisture or its foul air, I would cite the results of my experiments with hives so enclosed in tarred paper, that the only exit for air or moisture was the entrance. Colonies so protected winter perfectly. Furthermore, carbonic-acid gas is heavier than air, and settles.

Providence Co., R. I.

Amerikanische Bienenzucht, by Hans Buschbauer, is a bee-keeper's handbook of 138 pages, which is just what our German friends will want. It is fully illustrated, and neatly bound in cloth. Price, postpaid, $1.00; or with the American Bee Journal one year—both for $1.75. Address all orders to this office.

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

An Experience with Bees.

My father has always kept a few bees ever since I can remember. After he got too old to work he kept more bees, and I helped him. I made, or rather put together, the sections, put in the foundation or starters, and got them ready to put on the bees; helped him take off the honey, cleaned off the sections, and cased it ready for market, etc. Since he left us, in April, 1892, in his 89th year, my sister and I have run the apiary. We did all the work ourselves till the last two or three years, when our brother has helped us some. (I have had the rheumatism so much that I can't do half the work I used to, so our brother has taken my place and does whatever I am unable to do.)

The spring of 1892, if you remember, everybody lost nearly all their bees. We were left with 18 queens and a handful of bees, perhaps a pint to each queen. We fed them, and built them up, and increased them to 35 colonies, and that fall we sold about $100 worth of honey. That year was a good honey-year—if we had only had the bees to gather it. Since that time we have had some good and some poor honey-years—more poor than good, though—only two good ones. One of the years we got 5563 sections of nice honey, and the other 4432. Some years we would get pretty nearly 1000, and once a little over 1500, and the other years less. Last year was a failure. We had less than 500 sections of honey, but it was about all salable honey. We had 70 colonies of bees. There was fall honey enough for them to fill their hives, and they went into winter quarters in good condition.

We have 60 colonies now, 5 of them rather weak. This has been such a cold, bad spring for bees that I do not know whether they are as strong as they would have been if it had been a warm spring.

We have just taken the cushions off of them, and put the sections on last week. We winter them on the summer stands. White clover has begun to bloom. We are in hopes that it will be a good honey-year.

I do not see any way in which "Our Bee-Keeping Sisters" department could be improved. I nearly always turn to that department first. (MISS) L. C. KENNEDY.

Sangamon Co., Ill.

Does the Bee-Work Herself?

The "Sisters" department of the American Bee Journal has pleased me so much that it is the first thing looked for in every edition. I had five colonies last year, but because of the illness of my sister, who has been helping me for years in the housekeeping, I have been compelled to dispose of several, not being able to do justice to the bees, as they must be looked after continually here, because of the prevalence of foul brood in this vicinity. I had one colony attacked last year, and I got rid of it only through considerable work and some little worry. I had good "crops" of honey every one of the five years that I have had bees, and last year it was a remarkably fine one. I do practically all the work myself, unless there is a rush, or some heavy work to do, when I call upon Mr. V. for assistance.

Hamilton Co., Ohio. MRS. M. VAUPEL.

Transferring from Gums—Ants.

We have 3 colonies now. The boys and I do the work. We found a swarm in the corn-field, so we took a hive and put it in, and it is doing nicely at work. It is very rainy here, but when it isn't raining the bees are busy. The boys found 2 colonies in the timber last fall, so they sawed the tree and brought it home. We had to move them this spring, so they have not swarmed yet. One bee-keeper here told us they would not swarm for two or three months on account of moving them, but I believe they have gone down in the old gum. They are very busy. We have plenty of red clover, and it is all in bloom. There is plenty of white clover here, too.

1. I should like to get them out of the old gums. How shall we do it, and at what time? One is about six feet long and the other four feet, and they seem to be almost full. We only want to keep enough for our own use, as the boys are farmers and do not have much time to spend on them. These are the first bees we had anything to do with.

2. The ants are bad here. How can we get rid of them?

Bourbon Co., Kans., May 21. Mary J. Hall.

Answers.—1. Saw off at either end the part of the gum not occupied with bees, so they can not fill up any more. Then as soon as they swarm, hive the swarm and set it in place of the gum. Three weeks later drum the remaining bees out of the gum, and add them to the swarm, unless you want to make a separate colony of them. Then you can split up the gum and dispose of the combs. If you wish you can let the bees rob the honey out of the gum before splitting it up.

2. Generally the ants do little harm, and the bees are able to take care of them. You can kill them by setting for them Paris green mixed with honey. Put this on a dish and cover over so the ants can get in, but no bees.

Hiving a Swarm from a Tree-Trunk, Etc.

I think that the department of the Bee Journal, devoted to helping women bee-keepers, can be made very useful. I have kept bees for more than ten years, yet sometimes I find some work connected with it as difficult as at first, and also that we may still continue to be learners. I do all the work without help, except sometimes a friendly neighbor helps with a ladder. I use the Alley drone-trap to catch swarms, yet sometimes the queen gets out at a place not well guarded. Yet here is a difficulty connected with the use of the trap. When the trap is full of drones on a hot day, and I go to release them, the bees are so enraged that I get many a savage sting, as was my experience yesterday. You will, perhaps, advise leaving off the traps and clip the queens. Well, I have not done this, on account of the great difficulty of finding the queens, being very near-sighted. Yet, with all the difficulties and obstacles I do take pleasure in keeping bees, and find some profit also. I have 15 colonies; keep only Italians. I use some hives of the Falconer make, but during the past few years have had the Danzenbaker hive, and like it very well. It is the best for comb honey, and comb honey is all I produce. Last year I had as fine honey in appearance and taste as any I ever saw. I had a good crop, and have sold all at a good price here at the home market, selling for cash at groceries and private families.

My location is in the city. I keep the bees in our back-yard, overlooked and criticised by many observers. I do not find this so very pleasant, to be so much under observation; I mean all friendly, of course.

I have had trouble in regard to having swarms situated in very inconvenient places. I have sometimes put a hive above them with a small board to lead them in. They have nearly all gone in, and then all march out, and then fly off. I appreciate the answers in the Bee Journal in the question department. They often help me.

1. What is the best way to hive a swarm of bees that settles on the trunk of a tree or on a fence, sometimes on both sides of the fence?

2. What is the best time of the day to work with bees, in the forenoon or towards evening?

3. Is it advisable to shake off bees from a cluster taken from a tree before another hive lacking in bees? I have seen it advised, and tried it, but all the bees so shaken off were killed. The greater part went into the hive in which they were intended to go—a small part of the cluster, I mean. S. E. Wiley.

Dutchess Co., N. Y.

Answers.—1. Take the hive that you have ready for the swarm, and place the entrance close up to the swarm as possible. Gently smoke the bees to get them started to running into the hive, or you may brush a few of the bees into the entrance, either way will do; just as soon as a call is made they will all run in like a flock of sheep jumping over a fence. If the swarm is within reach it is an easy matter to hive them in this way. Just set the hive so the entrance will reach the bees.

2. Any time of day when the bees are gathering well. During the honey harvest bee-keepers that have many bees usually work all day. If nectar is scarce, and bees gather only in the forenoon, then the forenoon is best.

3. Depends on circumstances. Better not try it unless you have had a good deal of experience with bees.

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

BREEDING FROM INJURED QUEENS.

It is asking a good deal of us, and yet we cannot altogether blame the queen-breeders for asking it. You see, our faith gets low—and when it is clubbed still lower by what seems to be evidence of worthlessness, then to ask us to hold on, and breed one of those "house-flies" into a blessing! Ah, so! Yet a queen that *actually does* carry within herself valuable inheritances is not going to lose them by the personal injuries she gets going through the mail or otherwise. She herself may but poorly keep three frames full of brood, while her daughters could furnish the apiary with better bees than any it has ever had. But, then, there's the chap that would send us any old queen reared any old way from any old blood—perhaps we are watching out even too much for him. We won't *always* assume that a poor queen is valuable to breed from, Mr. Doolittle. We'll call on our smellers, and smell our way to the safe cases. Page 310.

THE DAIRY AND THE APIARY.

But there's surely this difference between dairy and the apiary when we set out to improve the two: With efforts and cash enough behind it, the dairy has an unlimited food supply. Likely as not the apiary may be taking already pretty nearly all the supply in reach.—H. L. Jeffery, page 312.

HIVING A BUNCH OF SWARMS IN A BOX.

Bad when three or four prime swarms mix. To hive the great mass in a dry-goods box, giving them room to store several pounds of honey—well, it is interesting to see that it succeeded twice. I should not expect it to succeed often. Page 315.

A SWARM-BEATER.

Mr. Ford's record of 32 swarms in one day beats my time. And as they hummed they seemed to say, "Dance, tenderfoot, dance!" Page 325.

ENAMELED CLOTH FAVORED.

Surprised as well as pleased to see that enameled cloth had a majority among Wisconsins. It's so handy that I have always adhered to it, although sometimes I feared I was a loser by so doing. If nine out of sixteen practical men favor it, I can go on and feel "chipper." Page 325.

ALFALFA THIS SIDE OF THE MISSISSIPPI.

Still feeding us with the old story of no alfalfa honey this side of the Mississippi, I see. Just wait till they get it vaccinated for hay and honey. These are times of progress, and five years ago must be no criterion for five years hence. Page 326.

THAT MARBLE-CAKE HONEY.

And Mr. C. P. Dadant finds late-extracted honey streaked with white and amber. I was almost tempted to wonder if that was not a trouble thought out in advance instead of a trouble experienced—but I'll say, "Wonder, lie down! don't you wonder this time." Somebody take a fruit-can and get up, marble-cake fashion, the streakedest can of honey it is possible to get up. Keep it in a warm room a week and see whether the streaks persist or disappear. I don't claim to know what the result will be. Page 326.

THE DOOM OF THE FORESTS.

F. Greiner, on page 327, strikes into a subject of great importance to the whole country, as well as to us bee-folks—the utter destruction of wood, lumber and timber. And yet almost every one manages to maintain in regard to the rather dire situation just in advance a sort of complete thoughtlessness. Not so with me. Perhaps I am too far the other way—find my heart feeling deeply sorrowful about the matter again and again and again. One of my best friends got through last winter by cutting down shade trees he thought he could spare. A great area of once "wooden country" immediately to the west of here is getting as bare as the back of Calamity's hand. Few farmers seem to have started in to have a wood-lot; and those who did have, "massacreed" it till it shows but here and there a forlorn-looking pole.

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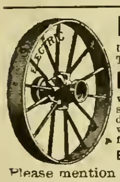

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FROM MANY FIELDS

Good Weather Needed.

Bees are very populous, there being lots of brood. We have the finest crop of white clover we ever have had, but no weather that the bees can use it. We are getting some honey from alsike, raspberries and honey-locust. We have had three weeks of rain. We ought to have nice weather soon, then we might have the largest white clover yield we ever had. I run for extracted and comb honey. In the fall I put comb honey supers under extracting supers when the flow commences. N. A. Kluck.

Stephenson Co., Ill., June 5.

Too Cold for Bees.

This part of the country was struck by a very heavy frost last night, freezing a large variety of plants. Clover and raspberries are in bloom, with plenty of nectar in them. It is too cold for bees to work. Basswood is loaded with buds, especially the younger trees. A. C. F. Bartz.

Chippewa Co., Wis., June 12.

Prospects Very Slim.

Bees came through this spring in very bad shape. I think one-half are dead in this county. There has been no rain to speak of, and everything is dried up. The prospects for white honey are very slim this year.

Orleans Co., N. Y., June 8. W. H. Hey.

Feeding Bees in the Spring.

In my article on feeding bees in the spring, page 360, at bottom of the first paragraph reads, "they are stirred up and create more heat," should read, "are in accord with my experience." And the sixth paragraph begins: "The queen stops laying, and either part of the whole brood-nest is left unprotected," should read: "and either part *or* the whole brood-nest is left unprotected."

I have also experimented with feeding extracted honey, liquefied and made thin with water, in comparison with the candied extracted honey made soft by stirring, and working it to see what effect it would have on brood-rearing as well as on making the bees excited and leaving the hives, and find that just as much brood is being reared when the thick honey is fed, as by the thin liquid. And that, while the thick honey is fed, no bees leave the hive in cold weather, and consequently see a decided gain in feeding the honey in its thick stage, in preference to the thin liquid, for the thin honey causes great excitement and the loss of many bees in cold weather. It also requires a feeder for each colony, which amount is a good deal in an apiary of several hundred colonies, and, if they are not attached to the hive permanently, are a regular nuisance, and many of them get lost and broken. But with the thick honey, we don't need any feeder, and don't even have to take away the paper on which the honey was spread, if we don't want to, as the bees take care of it themselves.

Another thing I find practical in a large apiary for feeding, when the bees get short of stores in warm weather, is to thin the honey to the consistency of nectar by putting 20 quarts into a large-sized wash-tub, throw a scoop-shovel full of planer shavings on top for a float. Put three or four such tubs in the yard and just watch the "honey-flow." After 10 or 15 minutes, should any of the colonies not be working in the feed, open *those*

Italian Queens, by Mail.
Golden and Honey Queens before July 1

	1	6	12
Untested	$1.00	$ 5.00	$ 9.00
Tested	1.25	7.00	13.00
Breeder	4 00		
2-frame Nucleus (no queen)	2.00	11.00	21.00

Add price of any Queen wanted with Nucleus.

Our bees are shipped in light shipping-cases. Purchaser pays express on Nuclei.

Safe arrival guaranteed of all stock sent out.

Batavia, Ill., Aug. 21, 1901.

Dear Sir:—I thought I would let you know as to results of the nucleus sent me. They were placed in 10-frame hives and now they are in fine condition. From one I removed 24 pounds of honey and had to give 6 of them more room, as they were hanging out. They have more than reached my expectations.

Yours respectfully, E. K. Meredith.

Davenport, Iowa, Dec. 31, 1901.

Your queens are fully up to standard. The honey queen that you sent my brother takes the lead. She had a rousing colony when put up for winter. The goldens can be handled without smoke or veil. Very truly yours,

John Thoeming.

Notice.—No tested stock sent out before May 15. Send money by P. O. Money Order or Express Order. D. J. BLOCHER,
17Atf PEARL CITY, ILL.

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We have some of the seed of that famous honey-producing plant—Catnip. It should be scattered in all waste-places for the bees. Price, postpaid, 15 cents per ounce; or 2 ounces mailed **FREE** to a regular subscriber for sending us one **NEW** subscriber to the Bee Journal for one year, with $1.00; or for $1.20 we will send the Bee Journal one year and 2 ounces of Catnip seed to any one.

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BINGHAM'S PATENT Smokers

25 years the best.
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hives and pour about a spoonful of the feed right among them, and see how quickly it will give them a "send-off."

Of course, the larger ones get the "lion's share," and, should, too, because they are just the very ones which need it most, for if we have a few small ones, they can be looked after very easily and supplied. I shall endeavor to keep a couple of barrels of fall honey on hand for such emergencies, instead of putting them on the market at a small figure, as I found it very handy to have nearly two barrels of it on hand this spring, for now my bees are in rousing condition to take care of anything that comes along in the shape of a honey-flow, and that, too, in spite of the horridest weather imaginable, so much so that I thought sometimes I would lose the whole of them. One of my near neighbors saved only 50 out of 300 colonies, and he claims those 50 are very weak.

A. C. F. Bartz.

Chippewa Co., Wis., June 6.

Cold, Bad Weather.

We are having very cold, bad weather here now. It is so cold that the bees can not work at all. The pastures are white with clover now. I hope it will warm up pretty soon.

Grant Co., Wis., May 30. U. S. Boyd.

Doing a Rushing Business.

Bees are doing a rushing business. There is lots of white clover. I use double hives, and the queens have commenced to ramble in the upper stories, making themselves a nuisance in general. Wm. Ruggles.

St. Joseph Co., Mich., June 12.

Swarming—Handling the Smoker.

The pesky bees are driving me to "beat the band." I have tried to suppress swarming as much as possible, and thought I knew fairly well how to do it. Put on surplus cases very early; in fact, some time before fruit-bloom time, and then doubled them, which the bees occupied almost immediately, and have done splendidly in putting in surplus; hence, I flattered myself that I have little or no swarming. But, my, O my! They commenced the last of May to swarm, and have kept it up every pleasant day since. I have cut out queen-cells; moved the old hives to new stands; put on additional cases, which they occupy immediately, and apparently go to work; yet it's swarm, swarm. Is it the Gallup hive that causes all this trouble? or, is it because of very strong colonies? They are all very strong, which result I have aimed to bring about so as to be able to take advantage of the white clover and basswood; but I am afraid I've been like the Methodist preacher who prayed for rain—overdid it!

Say, what's the matter with Mr. Root? I'm with Dr. Miller in the proper manner of holding the smoker. Is Mr. Root cross-eyed? or is his thumb where his little finger ought to be? Perhaps he works the smoker with the nozzle turned half round, and blows the smoke over the bellows. He is certainly "way off" on the proper manner of holding the Corneil smoker, and I feel like telling him so; but as you know him better than I do, rather have you do it. Wm. M. Whitney.

Lake Geneva, Wis., June 13.

[Here is what Editor Root says in Gleanings in Bee-Culture, about the proper way to handle a bee-smoker.—Editor.]

Within the last five or six years most of the modern hot-blast smokers have been made in such a way that, while in use, the barrel will stand perpendicularly, leaving the coals of fire or hot embers to lie on the grate while the fumes free from sparks or embers are blown out through a curved or deflecting snout. The position of the bellows likewise during the interim mentioned has been reversed, putting the large end at the top instead of at the bottom, as heretofore.

I have been surprised many and many a time to see how awkwardly bee-keepers handle the modern smoker. To my notion there is only one way. The thumb should be on the

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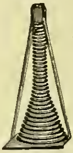

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Tuesday, August 18th, 8 a.m.

Round Trip—Los Angeles, August 1st to 14th, Good until October 15th,
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Sleeper—Double Berth, $6.00.
Additional for Grand Canyon Side-Trip, $6.50. Sleeper, $2.00.

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28 cents Cash paid for Beeswax.

This is a good time to send in your Beeswax. We are paying 28 cents a pound—CASH—for best yellow, upon its receipt, or 30 cents in trade. Impure wax not taken at any price. Address as follows, very plainly,

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Bred from best Italian honey-gathering stock, and reared in FULL COLONIES by best known methods. Guaranteed to be good Queens and free from disease. Untested, 75c each; 6, $4.00. Tested, $1.25 each. Untested ready July 1st. Tested about July 15th. Address,

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We have a strain of bees bred specially for honey-gathering and longevity, at the following prices:

One Untested Queen	$ .80
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Queens sent by return mail. Safe arrival guaranteed. For price on Doz. lots send for catalog. J. L. STRONG,
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Queens Now Ready to Supply by Return Mail

Stock which cannot be excelled. Each variety bred in separate apiaries, from selected mothers; have proven their qualities as great honey-gatherers.

Golden Italians Have no superior, and few equals. Untested, 75 cents; 6 for $4.00.

Red Clover Queens, which left all records behind in honey-gathering. Untested, $1.00; 6 for $5.00.

Carniolans —They are so highly recommended, being more gentle than all others. Untested, $1.00.

ROOT'S GOODS AT ROOT'S FACTORY PRICES.

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(Successor to Chas. F. Muth and A. Muth.)

side of the bellows next to the stove. This lets the hand hang in the natural position without any twist at the wrist. To handle the smoker, proceed as follows:

Stand in front of the hive, with the entrance at the left and the smoker in the *right* hand. With the left, pry the cover loose, then with the other holding the smoker in a perpendicular position, or only slighly tilted, perhaps, blow a little smoke over the tops of the frames. After the cover is removed, and the bees have been sufficiently quieted, set the smoker down close to the *back end* (not the front) of the hive on the ground. In doing this, the position of the wrist and hand does not have to be changed. Now, then, if the bees begin to act obstreperously, all one has to do is to reach down, grab the smoker in the most easy and natural way, and blow the smoke over the frames without twisting the wrist or the hand in an awkward, angular kink.

If one gets to using an implement wrongly, he will waste seconds, minutes, and hours of time as the weeks and months roll by. Every movement should be calculated to get the maximum results with the minimum of time and actual muscular force expended.

I have seen bee-keepers pick up the smoker in the left hand, hold it in an awkward way which I can hardly describe, and then when they were through lay the smoker down in front of the entrance, right in the height of the honey-flow. Or perhaps they will lay it on its side behind the hive; then when they want it for an emergency it can not be found.

Outlook None Too Good.

The outlook in this part of the State is none too good. We have had no rain since March, and cold weather in April, and a very windy and dry May. I figure on a small average crop, and would be surprised to see prices go below the last year's, especially since Southern California is complaining, too.

SEBASTIAN ISELIN.
San Joaquin Co., Calif., June 8.

A Terrible Season.

We are having a terrible season so far. It has been cold and stormy, and bees have done little or nothing. But we yet hope for the best. It looks pretty slim for a honey crop.

W. W. WHIPPLE.
Arapahoe Co., Colo., June 7.

Working for Section Honey.

The way in which I find it necessary to work to get the best out of a colony is to work for section honey in a shallow hive (7½-inch frames). First, we will consider that our colonies are in good condition for the main flow, about June 12. Now, if all of my bees would swarm about 15 days before, I would be pleased; I should consider lack of nectar the only drawback. I hive the swarm on the old stand with one-inch space under the frames, and in three days put on sections. The object in having a deep and large entrance is, that it is a great step in having all worker-comb built. It is a well-known fact to bee-keepers that bees wish to store this treasure away from the entrance and light. Therefore, the deep entrance forces the honey to the sections above, and the bees have a desire to build only worker-comb below.

Now, the parent colony: I shake and brush all of the bees it has on the frames, 14 days after the first swarm issues, into a new hive on 7 or 8 frames, with one-inch starters, the same as I did the first swarm, putting the frames in the same hive I take them from. In seven days more I again complete the last brush from the frames to the parent colony, and now the old stock is as strong as the first swarm, and will take a super and a few more frames of starters in the brood-chamber. If you prefer (I do) to feed honey in the frames in place of sugar syrup, just place the frames, which now have no bees on them, over the parent colony, and as it is just in the height of the honey-flow, and with drawn comb the parent colony will store more honey than the first swarm will in sections. The comb of honey may be given to the colony that needs feeding in the fall, or it may be extracted. This practice has never failed to give good results.

In regard to keeping down increase, a swarm may be divided and a part given to the parent colony, and as it is in the height of the flow you will receive benefit from the bees you added, and it gives a fine crop of honey from both the swarm and parent colony; or, in other words, the parent colony is furnishing honey to feed such colonies that may need it. With an improved strain of bees I, in my locality, challenge the world in like condition and locality. R. J. Cory.

Fairfield Co., Conn., June 13.

Beedom Boiled Down

Iron in Honey.

Prof. G. de Bunge says in Zeitschrift fuer Biologie that, among the hydrates of carbon which serve as foods, honey holds an exceptional place. Of all the sugary matters, honey is the only one containing iron; and strangely enough, almost exactly in the same quantity as found in white bread.—[Put this down as another point in favor of honey as food.—Ed.]—Stray Straws in Gleanings in Bee-Culture.

Are Balled Queens Suffocated?

Dr. W. G. Sawyer, replying to the remark that it "is not known whether a queen is killed by stinging or suffocation," says in the American Bee-Keeper:

Now, while I am not very well acquainted with the anatomy of the bee, it is reasonable to suppose that there is not very much difference in the suffocating qualities of the queen

BOYS WE WANT WORKERS Boys, Girls, old and young alike, make money working for us. We furnish capital to start you in business. Send us 10c stamps or silver for full instructions and a line of samples to work with. DRAPER PUBLISHING CO., Chicago, Ill.

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Special low price on queens in lots of 25 to 100. All queens are mailed promptly, as we keep 300 to 500 on hand ready to mail.

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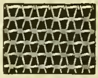

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Untested ....$1.00 each; 6 for $ 5.00
Select Untested... 1.25 each; 6 for 6.00
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Best money can buy...........$5.00 each.
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Add 25 cents to your order, for cartage, if wanted by freight, or 10 cents per pound if wanted by mail.

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and the drone, and the drone will not suffocate when completely immersed in water for 15 minutes, and I have not found out how much longer. The first trapful of drones I submerged until all were quiet, then I emptied them out. The next day the drones were as thick as ever. I recaptured them, kept them under water 15 minutes and set them aside to "dry." About nine out of ten revived and were as lively as ever.

Is it not starvation that causes the death of a balled queen?

"Bunched" Swarms.

I frequently have in my out-yards what, for want of a better name, I call "bunched" swarms. During my absence of a week or more, several colonies may swarm on the same day, and go together; and their queens being clipped they can not go with them, and they will return and go into one or two hives, filling the inside and covering the outside, and spreading out on the ground in all directions—two or three bushels of them. There are quite too many bees in such hives or on them to do well; in fact, such will usually do nothing but loaf, and wait for a young queen to hatch. I have found it works well to take a peck or half a bushel of these bees and give them to a set of combs from which the bees have been shaken. With a dust-pan made with high sides and back I scoop up from such "bunched" swarms what bees I need to give to these beeless combs, and thus form new colonies which seem to do as well as any. Of course, I do not always have these large swarms to go to for bees; but when I do find my bees badly mixed in this way I can straighten them out in this manner, and make them all work profitably.—J. E. Crane, in Gleanings in Bee-Culture.

Close Saturdays at 1 p.m.—Our customers and friends will kindly remember that beginning with July 1, for three months we will close our office and bee-supply store at 1 p.m. on Saturdays. This is our usual custom. Nearly all other firms here begin the Saturday afternoon closing with May 1st, but we keep open two months later on account of the local bee-keepers who find it more convenient to call Saturday afternoons for bee-supplies.

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Texas.—The Texas Bee-Keepers' Association meets in annual convention at the Agricultural and Mechanical College, at College Station, Texas, July 7 to 10, inclusive, during the Texas Farmers' Congress meetings. Cheap excursion rates. Large crowds. A good time. Learn a heap. Meet your fellow-men, and talk. Exhibits of all kinds of stuff. Premiums of all kinds awarded. Come, and bring what you have, and take home some of the premiums. You are invited. Be sure to be there. July 7 to 10, 1903, at the A. & M. C. of Texas, College Station.

Hunter, Texas. Louis H. Scholl, Sec.

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This Emerson stiff-board Binder with cloth back for the American Bee Journal we mail for but 60 cents; or we will send it with the Bee Journal for one year—both for only $1.40. It is a fine thing to preserve the copies of the Journal as fast as they are received. If you have this "Emerson" no further binding is necessary.

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One queen, $1.00; 3 queens, $2.75; 6 queens, $5.00; 12 queens, $9.00. My new book on Queen-Rearing given to all who purchase three or more queens. Send for Catalog.

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Good 3-frame Nuclei with Queens, strong pkgs. with bees, $2.00 each. Safe arrival guaranteed. Customers all reporting satisfaction and duplicating and increasing orders. L. frames. German-Italian bees No disease.

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The Low-Down Handy Wsgon.—The advantage of a low-down wagon on the farm is so well understood that we need not refer to them except in the briefest manner. They are wide-tired and can be taken into fields when the ground is too soft to use narrow-tired wagons. They can be used on meadows and pastures without injuring the sod, no matter how soft the ground is. They are handy in every sense of the word for hauling hay, grain, live stock, plows, harrows and similar implements to and from the field. A big load can be put on without pitching or lifting the load to a great height.

The only question to decide is where to get a handy wagon and get the best. The Farmers' Handy Wagon Co., of Saginaw, Mich., make one of the best if not the very best one made. This wagon has a long, broad platform and is equipped with either wooden or metal wheels. The wooden wheels are guaranteed in every way, being made of solid white oak, three thicknesses. The inner section presents the end of the grain to the tire while the two outer ones have the grain running crosswise of each other. The tire cannot be driven off with a sledge hammer nor can the wheel ever shrink so as to make the tire loose.

The metal wheels made by this company have the spokes swedged in instead of cast in. Spokes that are cast in come loose after a little wear, while those swedged in never come loose or rattle. The whole wagon is made on the same solid plan, and every part of it is guaranteed in every way. This company publishes a book about these wagons which shows by pictures and printed description just how it is made and what kind of a guarantee goes with it. The book will be sent free to any of our readers who ask for it and mention this paper. Address, Farmers' Handy Wagon Co., Saginaw, Mich.

HONEY AND BEESWAX

MARKET QUOTATIONS

Chicago, June 5.—The market is lifeless, no movement except extracted at low prices. Best grades of white extracted, 5½@6 cents; amber, 5@5½c. Comb honey is held at 15c for choice white, and anything not grading up to meet this requirement sold at 2@5c less per pound. Beeswax, 32c. R. A. Burnett & Co.

Kansas City, June 9.—No comb honey in our market. White or light amber would sell quickly at $3.50 for 24-section cases. Demand light for extracted, at from 5½@6½c. Beeswax in demand at 25@30c. C. C. Clemons & Co.

Albany, N. Y., Mar. 14. — Honey demand quiet; receipts and stock light. Comb selling, light, 15c; mixed, 14@15c; dark, 13@14c. Extracted, dark, at 7@7½c. Beeswax firm, 30@32c.
H. R. Wright

Cincinnati, June 1.—Very little change in market from last report. We quote amber extracted grades at 5½@6½c in barrels; white clover, 8@9c; supply equal to demand. Comb honey, 15@16c for fancy. Beeswax, 30c.
The Fred W. Muth Co

New York, May 21.—Comb honey trade exceptionally quiet, very little doing. Fancy stock not plentiful and is sold at 14c. A large supply of other grades on hand, which we are quoting at from 11@13c, according to quality, and in large lots make concessions from these prices. Extracted, unusually quiet, and prices show a downward tendency all along the line. Beeswax, firm at from 30@31c.
Hildreth & Segelken.

Cincinnati, June 8.—We have reached the time when there is no settled prices in the honey market. Everybody is waiting to learn how the crop will turn out, therefore we will sell or ask the old price; fancy water-white comb brings 15@16c. Extracted, amber, in barrels, 5¼@5½c; in cans, 6@6½c; white clover, 8@8½c. Beeswax, 30c. C. H. W. Weber.

WANTED WHITE CLOVER EXTRACTED HONEY!
Send sample and best price delivered here; also Fancy Comb wanted in no-drip cases.
THE FRED W. MUTH CO.
32Atf Front and Walnut, Cincinnati, Ohio.
Please mention Bee Journal when writing.

WANTED!
California Comb Honey in car-lots. It will pay you to correspond with us.
THOS. C. STANLEY & SON.
24Atf Manzanola, Colo., or Fairfield, Ill.

WANTED—Extracted Honey.
Mail sample and state lowest price delivered Cincinnati. Will buy FANCY WHITE COMB HONEY, any quantity, but must be put up in no-drip shipping-cases.
C. H. W. WEBER.
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has a hobby which is the sheep-breeder and his industry, first, foremost and all the time. Are you interested? Write to-day.
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over the Nickel Plate Road at one fare for the round-trip, within a radius of 200 miles from starting point. Tickets on sale July 3d and 4th, with return limit of July 6th. Through trains daily in each direction between Chicago, Cleveland, Buffalo, New York, Boston, and intermediate points. Every facility offered for the comfort of the traveling public. Individual Club Meals, ranging in price from 35c to $1.00, and meals a la carte, in dining-cars on Nickel Plate Road. City Ticket Offices, 111 Adams St., and Auditorium Annex. 'Phones Central 2057 and Harrison 2208.
13—25A3t

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that the freight rates from Toledo are the lowest of any city in the U.S. We sell

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Why does it sell so well? Because it has always given better satisfaction than any other. Because in 25 years there have not been any complaints, but thousands of compliments.

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Bee-Keepers' Supplies OF ALL KINDS * * * * *

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The classic in Bee-Culture—Price, $1.20, by mail.

BEESWAX WANTED at all times.

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THE JUNE FIRST NUMBER OF

Gleanings in Bee-Culture

HONEY
PURE
E. AIKIN
COLO.

contains two very interesting articles, both of which are fully illustrated with new views, to-wit,

Bee-Keeping in Jamaica
—AND—
Glimpses of Cuban Apiaries.

Page 516 of this issue contains a price-list of the NEW

Aikin Honey-Bags.

This new package for the putting up of Extracted Honey was fully described in the Mar. 1st number by Mr. Aikin. This is something that should interest every producer of liquid honey.

Gleanings one year and one Untested Italian Queen, $1.00. We are mailing these promptly. Gleanings 6 months, 25 cents.

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Nat'l Bee-Keepers' Convention at Los Angeles, Aug. 18-20

AMERICAN BEE JOURNAL

43d Year. CHICAGO, ILL., JULY 2, 1903. No. 27.

WEEKLY

APIARY OF A. H. KLICK, OF TREMPELEAU CO., WIS.
(See page 420.)

THE AMERICAN BEE JOURNAL

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GEORGE W. YORK.

DEPT. EDITORS,
DR. C. C. MILLER, E. E. HASTY, EMMA M. WILSON

IMPORTANT NOTICES.

The Subscription Price of this Journal is $1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

The Wrapper-Label Date of this paper indicates the end of the month to which your subscription is paid. For instance, "dec03" on your label shows that it is paid to the end of December, 1903.

Subscription Receipts.—We do not send a receipt for money sent us to pay subscription, but change the date on your wrapper-label, which shows you that the money has been received and credited.

Advertising Rates will be given upon application.

National Bee-Keepers' Association

Objects of the Association:

1st.—To promote the interests of its members.
2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

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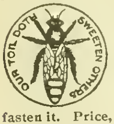
☞ If more convenient, Dues may be sent to the Secretary, at the office of the American Bee Journal.

A Celluloid Queen-Button is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-lapel. It often serves to introduce the subject of honey, and frequently leads to a sale.


OUR TOIL DOTH SWEETEN OTHERS

The picture shown herewith is a reproduction of a motto queen-button that we are furnishing to bee-keepers. It has a pin on the underside to fasten it. Price, by mail, 6 cents; two for 10c; or 6 for 25 cents. Send all orders to the office of the American Bee Journal.

Dr. Miller's New Book

SENT BY RETURN MAIL.

The book contains 328 pages, is bound in handsome cloth, with gold letters and design; it is printed on best book-paper, and illustrated with over 100 beautiful original half-tone pictures, taken by Dr. Miller himself. It is unique in this regard.

The first few pages of the new book are devoted to an interesting biographical sketch of Dr. Miller, telling how he happened to get into bee-keeping. Seventeen years ago he wrote a small book, called "A Year Among the Bees," but that little work has been out of print for a number of years. While some of the matter used in the former book is found in the new one, it all reads like a good new story of successful bee-keeping by one of the masters, and shows in minutest detail just how Dr. Miller does things with bees.

HOW TO GET A COPY OF DR. MILLER'S "FORTY YEARS AMONG THE BEES."

The price of this new book is $1.00, post-paid; or, if taken with the WEEKLY **American Bee Journal** for one year, BOTH will be sent for $1.75.

Or, any present regular subscriber to the American Bee Journal whose subscription is paid in advance, can have a copy of Dr. Miller's new book *free as a premium* for sending us **Two New Subscribers** to the Bee Journal for one year with $2.00. This is a magnificent offer, and should be taken advantage of at once. For many of our readers it is not only an easy way to earn a copy of the book, but at the same time they will be helping to extend the subscription list of the old American Bee Journal, and thus aiding also in spreading the best kind of apicultural information among those who would be successful bee-keepers.

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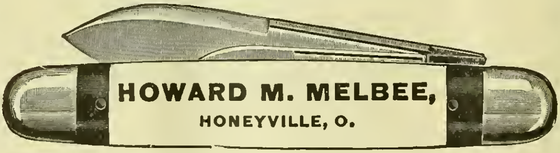
Your Name and Address on one side—Three Bees on the other side.



[THIS CUT IS THE FULL SIZE OF THE KNIFE.]

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The Novelty Knife is indeed a novelty The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the subscriber, and on the other side pictures of a Queen, Drone, and Worker, as shown here.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a last-time, with proper usage.

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How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid for $1.25, or give it as a Premium to the one sending us THREE NEW SUBSCRIBERS to the Bee Journal (with $3.00.) We will club the Novelty Knife and the Bee Journal for one year, both for $1.90.

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ESTABLISHT IN 1861

AMERICAN BEE JOURNAL

THE OLDEST BEE-PAPER IN AMERICA

43d YEAR. CHICAGO, ILL., JULY 2, 1903. No. 27.

Editorial Comments

The Queen is the Soul of the Colony.—If you are a beginner, one of the first truths you should learn is that it is of such great importance to have a good queen in a colony that too much pains can hardly be taken to have your queens of the best. If none of your colonies is up to the mark, then no better investment can be made than to buy a queen of good stock. If all your colonies are good, you may do well enough to leave the entire matter of queen-rearing to the bees, that is, *if* you prefer to allow the bees to swarm naturally. If any one colony is better than the others, then it will pay to be to the trouble of having your young queens mainly, if not entirely, reared from that superior stock. Even if it makes a good deal of extra work, it will pay well in the end.

Quality of Queens Mailed.—It is pleasant to find a man speaking of his competitors in a broad-minded way. G. M. Doolittle says in Gleanings in Bee-Culture:

> I have not had the experience of some in receiving from queen-breeders queens of which 90 percent turned out poor, or "as worthless as so many house-flies," as one writer puts it. I have rarely received anything but first-class queens in all I have purchased; and from these queens purchased, and from what I know of several of our queen-breeders, I have not a single doubt that thousands of the queens sent out by queen-breeders are every whit as good as those reared under natural swarming, for I am satisfied that the most of our queen-breeders to-day spare no pains to bring about an equally favorable condition to that under which natural swarming is conducted, while rearing their queens.

Shall Section-Supers Be Added Under or Over?—A series of articles on comb-honey production, "How to Get All the Sections No. 1 and Fancy," has appeared in Gleanings in Bee-Culture, written by Orel L. Hershiser. After directing to give the first super in the usual way, Mr. Hershiser proceeds:

> If the flowers are secreting nectar in abundance it will be but a few days till capping of the combs in the super commences, which will indicate the time when a second super should be placed *above* the first. Capping will now progress in the first super. At the same time, the honey-laden bees returning from the fields, not all being able to dispose of their burdens in the first super, which is rapidly approaching completion, will commence storing in the second, and continue without interruption. The opportunities for work in the first super are rapidly diminishing, and day by day fewer bees can be employed there, till finally the super is finished, and its completion will have been accomplished under the most favorable circumstances for thorough and complete work. But there is no enforced idleness, for the upper super furnishes store-room for all the nectar that can not be stored in the first one. In due time capping will commence in the upper or second super, if the honey-flow continues, which indicates the time when the capping in the first is finished. The first super may now be removed from the hive; and the second one, which is now being capped, substituted in its place, and a third super placed *above* it. When capping has commenced in the third super, the second, or one next to the brood-body, will be finished, and may be removed; the third, or one over the second, substituted in place of the latter, and a fourth placed above the third; and so on to the end of the season.
>
> The natural instinct of the bee is to store its food as near as possible to the brood. The apiarist should heed the teaching of Nature, and keep food and brood in as compact a space as possible, and not violate the rule so unerringly pointed out by the Creator, by lifting the partly-filled super and placing beneath it one containing empty sections, according to the orthodox teaching. By practicing the orthodox method, much of the working force will be withdrawn from the upper super, and work will be distributed through that and the lower one in undesirable and unprofitable proportion, ofttimes resulting in none of the sections being properly filled.

It will be noted that the advice is to give the additional super on top at all times, and never allow more than two supers on at a time. This view, apparently endorsed by the editor of Gleanings, is at variance with the practice of many, probably of most, comb-honey producers who put the second super under the first, not waiting for any sealing in the first if there be a good flow, but adding supers under as fast as all are crowded with bees, only putting empty supers on top toward the close of the season.

The plan advocated by Mr. Hershiser will undoubtedly secure sections thoroughly filled out, and more promptly sealed, but the beginner should understand that it is not without objections. With an empty super on top, the bees must be crowded harder to make a beginning than when the empty super is under, and this harder crowding means just so much more inducement toward swarming. The crowding also means more superfluous work in the way of brace-combs and burr-combs, honey being stored between the two supers, fins built on separators, etc. The honey being sealed in the lower super, it will be more rapidly done, and rapid sealing tends toward whiteness of comb; but the very thing that tends toward whiteness in that direction has the drawback that it tends toward darkness in another direction. Bees have a trick of carrying bits of the old, black brood-comb to help finish up the sealing of sections if the sections are close enough to the brood-combs, so more of this objectionable work will be done when the finishing is done in the lower than when it is done in the upper super.

It is a bad thing to give too much room; it may be a worse thing to give too little. A very weak colony may never need more than a single super, there being plenty of room in that one super for all the bees that can be spared from the brood-nest. It does not require a very strong colony to fill two supers, there may be force enough to fill three, four, or more supers. When a powerful colony has four or five supers crowded with bees, the work going on at all points in all of the supers would there not result a serious loss to confine those bees to two supers?

While not questioning that with never more than two supers on at a time, the additional super always being added above, a greater proportion, possibly a greater number, of fancy sections may be obtained, there is room for serious question whether the total amount of money received for the crop will be as great as by following a different plan.

Don't Use Old Bees for Rearing Queens.—After worker-bees have attained the age of about 16 days, at this time of the year they begin field-work, and although they may be forced to do house-work, they are not so well fitted for it as when younger. So, when getting queen-cells started, do not depend upon old bees. The suggestion is likely to occur to the novice, "If I move a colony of bees from its stand, putting in its place a hive containing one or two frames of brood, the field-bees will naturally return to the old stand, and finding no queen there they ought to proceed at once to rear one, and that will be an easy way of making two colonies out of one." If there were no other objection to the plan, a sufficient objection would be that rearing queens is not in the line of business those field-bees have been following, and the queens they rear will be more or less inferior.

Wagon vs. Wheelbarrow.—Quite generally wheelbarrows rather than small wagons or carts are used by bee-keepers in their work about the apiary. G. A. Deadman, in the Canadian Bee Journal, makes a strong plea for something with more than one wheel. One of the advantages of a wheelbarrow is that a load is more easily dumped from it than a wagon, but one does not want to dump things used in an apiary, for the more easy a wheelbarrow is to dump the more easy it is to upset. One must be careful how a load is placed on a wheelbarrow, or over it goes. The wagon is stable, no matter how the load is placed.

An advantage that would not occur to every one is that the wagon takes up less room, making it convenient to have two at a time in the extracting-room, one with full combs, the other to receive the empty combs.

One trouble is that while a wheelbarrow is a staple article of sale, easily found in any town, and at a low price, the wagon is hardly to be found at any price, and it is expensive to make one.

A New Section-Frame is referred to in the British Bee Journal, although no description is given of it that is very definite. The nearest that comes to anything like a description is as follows:

> I wonder how many bee-keepers have heard about the recently invented section-frames? With the exception of being close-ended, they are very similar to the ordinary shallow frame, and are equally suitable for extracting; but when intended to be sold as comb honey, by means of a simple arrangement which causes no obstruction to a free passage over the entire comb surface, the bees are made to store the honey in three separate divisions, any of which can be cut out without interfering with the others.

Parthenogenesis and Its Unsolved Problems are to have careful investigation at the hands of E. F. Phillips, a prominent graduate student of the University of Pennsylvania. He has gone to Medina to pursue his investigations, taking with him the best apparatus the University affords.

Association Notes

Mrs. Dr. A. B. Mason, the widow of the late Secretary of the National Association, has sent to Eugene Secor, the former General Manager, a check for $81.08, which is supposed to be in full of the funds belonging to the Association in the hands of Dr. Mason at the time of his death. This amount likely includes what Mr. Abbott collected as dues during the month he served as General Manager, which amount he forwarded to Dr. Mason.

The above information we have from General Manager France, to whom Mr. Secor forwarded the check from Mrs. Mason.

The Los Angeles Convention is going to be well attended, if we may judge by the inquiries coming in. Here is a sample:

> Editor Bee Journal:—My wife and self are planning to go to the big convention at Los Angeles, and would like to go with the crowd from Chicago, Aug. 12:
>
> 1. How many stop-overs are allowed, and where?
> 2. Must we all go home together?
> 3. Does $50 include the berth in the sleeping-car?
> 4. How much extra would it cost to see Grand Canyon?
> 5. How much do you think it will cost for a couple to make this trip from Chicago, including all expenses?
> 6. Would you advise us to go via Chicago, or try some route from the Twin Cities?
>
> Any figures, advice, or particulars, regarding this matter will be greatly appreciated. Leo F. Hanegan.
>
> St. Croix Co., Wis.

To the foregoing we may offer the following:

1. As we understand it, as many stop-overs as are desired will be allowed west of Colorado.

2. It is not necessary that all should make the return trip together. Neither is it necessary that any one should return over the same route as when going. Arrangements can be made to go one way and come back another at the same cost.

3. Fifty dollars for the round trip from Chicago does not include the cost of berth which, in a tourist car, is $6.00 for one way.

4. The extra cost for seeing the Grand Canyon will be $6.50 for car-fare and $2.00 for berth, if taken.

5. It would be very hard to estimate the cost of the trip, as different people will have different views, and different sized pocket-books. However, it ought not be very hard for each one to estimate about what his expenses would be, when he knows the exact cost of the railroad and berth tickets. It would be well, though, to take plenty of money along, as there may be some side-trips that one would like to take out there. After going so far, it would seem too bad to deny one's self anything that really ought to be seen and enjoyed. We are looking forward to it as the one great trip of our lifetime, and although we can not be away from our office much more than ten days, we hope to take in everything possible during the trip.

6. Of course, we would advise all who can possibly do so to join the party going from Chicago, as it will be "the more the merrier." We are anticipating about the best part of the trip on the going journey. There will be ample time for visiting, getting acquainted, enjoying the scenery, etc., as we go along. There is really no fun traveling or seeing things alone.

We have answered the questions of Mr. Hanegan in this way, as we suppose there are others who would like the information that we have tried to give. If there is anything else connected with the trip that any other reader would like to know we would be pleased to tell all about it, so far as we are able. We only hope that every bee-keeper, who can possibly do so, will arrange to go to the Los Angeles convention. California bee-keepers are going to do great things for those who attend, and we are anticipating the largest and best convention the National has ever held. Of course, every bee-keeper who has not yet been to California will want to go on this trip. It will be a memorable time and convention.

Miscellaneous Items

J. A. Green, Foul Brood Inspector of Mesa Co., Colo., reported that on June 19 a splendid honey harvest was just drawing to a close, cut off by the mower. It was a sad day for Illinois bee-keeping when Mr. Green decided to go to Colorado. He is a bee-keeper of whom any State may well be proud. We shall hope to hear more from him as time goes on.

The Apiary of Mr. A. H. Klick appears on the first page this week. He wrote thus about it:

> I send a picture of my apiary and farm-house. It shows also myself and two of my daughters, who are quite handy in the apiary. I have kept bees for about 14 years. Since 1896 I have had from 95 to 110 colonies. The past three years I have had good success in preventing swarming. I use the 8-frame Wisconsin hive, and run them entirely for comb honey.
>
> We read the American Bee Journal, every issue of which is worth its weight in gold. A. H. Klick.

A Donation of Strawberries was sent us by Dr. C. C. Miller last week. We had heard some pretty big stories about the Doctor's strawberries in other years, but this is the first time we have had a chance to sample them. We can say that the berries are actually as big as the stories told about them. The 30 boxes were all the finest we have ever seen. We do not know what connection the Doctor's strawberries have with the "Stray Straws" he furnishes to a certain bee-paper, but if the straws are appreciated by any who read this they will have some idea of the appreciation we have for the strawberries.

The Doctor said, when sending the strawberries, that they would have sent bigger ones but could not get them. We are sure that bigger berries would not be any better.

Dr. Miller and his family are what some people would call cranks on roses, and strawberries, and bees. But what finer trio could be found? Also, what happier trio can be found than Dr. Miller, Mrs. Miller, and Miss Wilson? "I don't know" would be a good answer.

Queenie Jeanette is the title of a pretty song in sheet music size, written by J. C. Wallenmeyer, a musical bee-keeper. The regular price is 40 cents, but to close out the copies we have left, we will mail them at 20 cents each, as long as they last.

Convention Proceedings

Chicago-Northwestern Convention.

Report of the Chicago-Northwestern Bee-Keepers' Convention, held in Chicago, Dec. 3 and 4, 1902.

BY OUR OWN SHORTHAND REPORTER.

(Continued from page 406.)

STARTING PEOPLE IN THE BEE-BUSINESS.

"Is it advisable for bee-keepers to sell bees to people who have no interest in the bees, but who, from reports of fabulous wealth obtained from the bee-industry, wish to go into the bee-business?"

Mr. Abbott—That depends upon whether they have the money to pay for them.

Mr. Pettit—Don't sell them any.

Mr. Whitney—If I refuse to sell to them they are all the more anxious to buy from somebody else, and if I sell them and then advise and assist them until they learn that there is something more to the business than they care to do, they give up in disgust, 97 out of every 100.

Dr. Miller—That's all true enough, but you are doing a lot for the money you get there. There are two things that you have to do for your money. They will come to you at your busiest times. "Now, I want you to go and see my bees," and think you have plenty of time to go and do it, and feel hurt if you don't do it, and just so far as they are successful they are taking that much from your crop of honey. They pull out pretty surely, but while they are pulling out they are pulling something out of you, and if they succeed with half a dozen colonies, that's just so much taken out of it. Perhaps if you refuse to sell them it will make them think there is a bonanza in it. I don't know which is the best way. I believe in my locality it is about safe not to sell them.

Mr. Abbott—I have given away about a half million dollars worth of advice to that kind to people, and I have got my living by doing it. I feel richer and better, and I have good honey now, and that's worth more than anything else.

WARM WEATHER AND WINTERING OF BEES.

"Has this warm weather made the bees have less honey, and have they consumed more honey than usual on occount of the warm weather?"

Dr. Miller—I should say that there is a wrong assumption in that question. I don't know the difference between my locality and Chicago. This winter is unusual in the great amount of stores that the bees have. I don't think I ever knew a year in my life when they were so fully supplied with winter stores.

Mr. Wilcox—There is a very important question arises in there, that I have never heard discussed. Is warm weather the early part of the winter detrimental in any manner to the wintering of the bees? Does it reduce their stores materially? I have never heard that discussed. I have often thought of it.

Mr. Arndt—I am the one that asked that question. About the first of October I examined the bees and found them in good condition. Last Saturday I was going over them, and a marked colony which had a lot of honey is apparently light now. I attribute it to the warmth; the bees were too active, and consumed the stores which they would not have consumed had it been cold so they couldn't get out.

Mr. Abbott—I want to ask if we should discuss that question and discover that the warmth felt wasn't a good thing for the bees, what could we do about it?

Pres. York—See the weather man!

Mr. Wilcox—They could be placed in a more shaded place where the temperature would be less. I usually have mine working more or less around the shop or neighborhood, and don't try to stop them, and I often wondered whether it was injurious or not. There are many things I could do to keep them more quiet during October and November.

Mr. Clarke—Is that to find the condition, the lightness of the bees at the present time around Chicago? I don't think that there has been any answer to that question at all.

Pres. York—What do *you* find?

Mr. Clarke—From what I have heard from bee-keepers, bees are light in stores, and more especially around Chicago locality, and those that take off their supers before the honey-flow are nothing more than in a condition to go through the winter. Those that left their supers on until the close of the honey-flow, from all I hear, their bees are in a very light condition.

Dr. Nussle—The same up in Wisconsin.

Dr. Miller—In answer to the question I should say: Yes, there has been more honey consumed this fall, because there has been warm weather.

Mr. Clarke—That is just one reason for there being a light honey crop, and that warm weather came at a time when it ought not to come, and the bees could go out and fly and not get anything. It is exactly the same way with a human being. If they work they have to have more feed.

Mr. Horstmann—I don't think the warm weather had any effect on the bees in that respect. I think there was no honey for the bees to get. I had one hive on the scales, and the highest they got in one day was six pounds, and it ran down to one-half pound along during September, and then they held their own, got just about stores enough out in the field for their own consumption. The warm weather had no effect at all, I think. We had some flowers right along during the summer and fall, and there was very little honey to get. We had lots of white clover, but the bees didn't get any honey, and the field was full of blossoms, but I had to feed my bees.

Dr. Miller—You came to a point where your bees flew out at will, and gathered just what they used, and the next day they flew out and didn't get quite as much, and then you were losing.

Mr. Arndt—Yes, sir; in the month of November it seemed to be they didn't get anything at all.

Mr. Wheeler—Mine were working on dandelion until Thanksgiving Day.

Mr. Horstmann—One thing we must consider, the bees have been rearing brood, and it takes considerable honey to rear brood. If they had quit rearing brood earlier this fall, the chances are the colonies would have run down considerably more. My bees have now just about quit, and the hive I have on the scales, is just about holding its own.

Mr. Whitney—I bought an apiary late in the season at Lake Geneva, Wis., about 15 colonies. I took off the supers and they were well filled with honey for extracting. On taking them off and examining the brood-chambers I found them almost entirely empty, about the middle of October. Of course, I removed the empty ones and placed on the brood-chamber the surplus, and I was surprised to find that the brood-chamber had plenty of surplus in the second story. I removed that by placing the surplus in the other tier.

NUMBER OF COLONIES FOR ONE MAN.

"How many colonies can one man care for properly when producing comb honey?"

Dr. Nussle—It depends upon who the man is. From one to 500 colonies.

Mr. Whitney—As many as can be profitably kept in one apiary.

Mr. Wheeler—I think I would have gone to the poorhouse long before this if I had run only one apiary. I have five, and attend to these myself, as nearly as I can, and as it is we have hard work to make ends meet at the present time; but I believe that one man can manage more than one apiary, and I believe it is so considered. I know I can do it, and have no trouble at all.

Dr. Miller—How many colonies do you think you can run alone?

Mr. Wheeler—Five hundred.

Mr. Wilcox—I can't see that he has differed from me, only in the form of expression. As many as can be kept in one apiary anywhere, and I believe they can keep from 400 up. I have no doubt but what a man can run three apiaries for comb honey, but I think it will be safe to say that he can attend to as many as can be kept in one apiary.

Mr. Clarke—Is the question how many he can run by himself, or with assistance?

Pres. York—One man.

Mr. Clarke—And run them all for comb honey?

Pres. York—That is the question.

Mr. Clarke—It is a pretty hard question to answer, that's sure. It can be answered only by the man himself who does it, and according to what time he gives to it previous to the honey-flow.

Dr. Miller—Give him a chance to spend a year on it and then report.

Mr. Wheeler—I understand we were talking about Chicago locality. I don't believe in over 100 colonies in Cook County in one place.

BLACK LIZARDS AND BEES.

"Do black lizards, such as are carried in the cellar with potatoes, eat or attack bees in the cellar or out-of-doors?"

Mr. Fluegge—I carried six or eight out of my bee-cellar. I put them on the scoop-shovel and threw them out. I think they eat insects. They are very common, and you are sure to find them in potatoes.

Mr. France—They are harmless as far as the bees are concerned.

SHALLOW OR DEEP BROOD-FRAMES.

"Which is the better, a shallow brood-frame or a deep frame?"

Dr. Miller—Yes, sir.

Pres. York—Dr. Miller says, "Yes, sir." Does anybody disagree?

Mr. Wilcox—I think that question should be amended so as to ask what depth of brood-frame is best.

Pres. York—I don't think we have a right to amend it.

Mr. Wilcox—We can not agree on what is shallow or deep.

HYBRID BEES OR ITALIANS.

"Is there any advantage in hybrid bees over the pure-blood Italians (hybrids meaning a cross between Italians and black bees)?

Dr. Nussle—There is no advantage in hybrids over Italians.

Dr. Miller—Yes, sir, you are safer from the boys of the neighborhood troubling your bees.

Dr. Nussle—I never have any boys troubling mine.

Mr. Clarke—There is an advantage, but lots of disadvantages. Undoubtedly for comb honey they do a little whiter capping. They leave more of an air-space between the honey and the capping, which causes the honey to look whiter, but there are so many other qualities about them that are objectionable that it is pretty hard to tell.

Dr. Miller—That runs a good deal by standards. Take a standard of hybrids and they will cap particularly white, and there are many Italians that will cap whiter than the others. I hardly think it fair to take them as a whole, and say that hybrids will cap honey whiter than the others.

Mr. Clarke—Isn't it a fact the lighter-colored the bee the more the tendency to poor capping?

Dr. Miller—I should say hardly.

Mr. Clarke—It has been my experience. I have tried a great many breeds. For that reason, I must say five out of six queens I had to kill. For extracting, some of them I won't dispute but what they are good workers. As a general thing they run to poor capping. That has been my experience.

Mr. Stanley—It is all in the strain of the bee. I have had some of the yellow bees put up the whitest and some put up some of the dark. It is all in the strain of the bee, is my experience.

Dr. Nussle—I understand that is brought about by the capping being very close to the honey, making that appearance. The Italians have more tendency to do that than the Carniolans or black bees, or a cross between them.

TAKING BEES OUT OF THE CELLAR FOR A FLIGHT.

"Is it advisable to take bees out of the cellar for a flight any time before taking them out for good?"

Mr. Baldridge—No.

Dr. Miller—That is a rule that has been accepted, and we have all given up and felt it was settled, but down at Medina, Ohio, they have unsettled it. That is the trouble with our settling down on something. I know for sure that there is one of the things that can't be. If you take them out and put them back there will be damage. In spite of that they did it at Medina and got along nicely. I am going to try it and see whether they will be all dead the next spring. I am of the opinion that we settled on it prematurely. Those Medinaites have done it all right.

Mr. Whitney—Wasn't that an exception to the rule?

Dr. Miller—I don't know.

Dr. Nussle—I don't think you could ever do that successfully in Wisconsin. We have snow on the ground all winter, and along until it goes off in March or April. It would never do when it is ever so warm with snow on the ground.

Dr. Miller—Well, that might be true there. The conditions here and as far south as Ohio will give you plenty of times when there is no snow on the ground at all. This is perhaps a very important thing to find out about. If it is a fact that in the middle of winter they took them out and let them take a flight, and they are not the worse for that, then it is worth while for all to know it. It might be well for a number of us to try that thing this winter, particularly where the ground is not covered with snow.

Dr. Nussle—Ought it to be warm, about 60 degrees?

Dr. Miller—A day when it is about 60, and dry, and see whether they come out better or worse. Here is what we have done. I don't know just how much was tried in the first place, but it was given out as a law, and we all accepted it, that we must not take out any bees until we took them out for good, and for years we have acted upon it. Suppose we try that, and see if they come out as they did at Medina.

Mr. Horstmann—I moved out my bees early last spring, and we had a cold-spell and I put them back and set them out a second time, and it did them lots of good, and the small colonies came out splendidly in the spring, and built up good and strong. I believe the reason was that I put them back and got them out again when the weather was more settled. I think I have lost very few bees by doing that, and I would have lost a good deal more on account of uneasiness. They seemed to be very quiet, and they remained quiet.

Mr. Wilcox—I have too many bees myself to carry them out and in. I have neighbors who, under my advice, have done it with two or three colonies and succeeded. I advised them not to carry them out until the first of March, but if it comes warm enough for them to fly early in March be sure and place on the stand early in the morning, and not let them out more than one day, and the next time out place again on the same stand, so as not to keep them continually mixing up. As soon as they get a flight, bees commence breeding. My own bees are not carried out until the first of April. It is true of my bees, after they commence breeding, I don't want them to remain in winter quarters for three or four weeks.

(Continued next week.)

Contributed Articles

Co-Operation Among Fruit-Growers, Etc.

BY PROF. A. J. COOK.

I HAVE kept the readers of the American Bee Journal informed regarding combination among citrus fruit-growers of California. It will be remembered that in 1893, with only a few thousand car-loads of fruit, the market had become demoralized, so that many orchardists found at the end of the season they had really lost on their fruit. The amount actually received for the sale of fruits was less than the expense of marketing. Many fruit-growers were entirely discouraged, and all felt that something radical must be done at once. This led to the organization of Southern California Fruit Exchange. A large number of the growers joined this Association, and I have previously explained its workings. It really saved the fruit industry of Southern California.

Since that time the Exchange has done better for its members than has any commission man or any other organization of citrus growers. Yet, strange as it may seem, hardly half of the fruit has ever been marketed by the Exchange. Indeed, the commission men, in the aggregate, have done just as much in the last few years as the Exchange, each doing about 44 percent of the marketing. The balance of the fruit was sold by individuals who were in no organization. These latter were usually very largely producers who had special advantage from a very wide business acquaintance in the East. Often these men had previously done business either in New York or Chicago, and thus had exceptional acquaintance and advantage.

The present season has been an unfavorable one. The weather has been very cool and thus the fruit was slow to ripen, and has not had the sweetness for which California fruit has previously been famed. The low prices and the fact that there was no single selling agency has been a great disadvantage not only to the Exchange but to the commission man. While the Exchange has suffered less than other selling agents, all have suffered greatly. It is stated that the commission men have lost much money, and one of our most prosperous orange-growers, who sells his own fruit, and who has usually received the largest prices, told me a few days since that he had hardly paid expenses this year. All this led all interested parties to consider seriously whether there was not a better way.

NEW SELLING AGENCY.

A few weeks ago the managers of the Fruit Exchange and several of the commission men—packers who have bought and sold much of the California citrus fruit—got together to consider the matter of a sort of trust—a combined selling agency. Previous to this time the Exchange knew nothing about where the commission men would sell their fruit, nor yet did any commission man know where the Exchange would ship its fruit, or where any other commission man would sell his. This lack of control and distribution was a serious menace, and all recognized that some scheme must be devised to remedy the evil. After many meetings and much consideration of the entire subject, the following plan was agreed upon:

All citrus fruit should be sold under one agent. This agency will consist of two factors here in California. One will be the old Exchange, which will carry on its business just as it has before, except now it will know where all fruit is being sold, and will be able to distribute its output to the very best advantage.

The other factor consists of what is called the citrus union, and will be made up of all the commission men or packers outside of the Exchange, as I think now nearly all have joined the organization. The manager of the old Exchange is the manager of the new selling agency.

We see, then, that this new selling agency will have absolute control of the distribution of the fruit, and thus there will always be an intelligent distribution. The new organization will always have its finger upon the pulse of the market and will know just where to sell the fruit, that no car-load will compete with any other car-load. In fact, all will be co-operation as far as marketing is concerned, and there will be no competition.

Of course, there will still be competition, as all the fruit will sell upon its merit, and only the best fruit will bring the best price. About 90 percent of the output is now controlled by this new selling agent. It remains to be seen what the individuals who have been selling their own fruit will do. Some of them have already joined this new organization. Others will probably do so; while a few may very likely remain outside. If they do, it will only be because of peculiar circumstances they can do better. The new selling agency will have their sympathy, and they will do nothing to antagonize it.

Of course, this new selling agency is in a sense a trust. It will not, however, do as many trusts do, try to lessen the output of fruit that they may thereby raise the price. They will, however, control distribution, and in a certain sense the market. This will result in preventing all glut of the markets, and will secure an even, fair distribution, and uniform prices for good fruit. It is not probable that it will raise the price to any extent to the consumer.

It is strange that the old Exchange did not get nearly all the fruit-growers. All acknowledge, so far as I know, that it was a good thing, and really came as the salvation of the fruit interest; while many believed, or hoped, that they could get better prices outside the Exchange, and thus they handicapped this latter association by preventing that control of distribution of the fruit which is so very necessary to the best success.

I believe the bee-keepers are wide awake in this matter of intelligent co-operation. It seems to me that any matter of history in this great movement, like that which I have given above, is of special interest and importance to them at this juncture. The Exchange in the citrus industry of Southern California not only saved the business, but also makes possible this new combination.

I neglected to say that in the new scheme the Exchange is not to exploit the fruit-growers who have previously sold to commission men. The outside packers have also promised not to take the fruit from any one who has previously been in the Exchange. Those owning orchards that are just coming into bearing are to be about equally divided between the Exchange and the Citrus Union. Our most intelligent fruit-men rejoice in the Exchange and its great success. They rejoice now still more in the belief that this new combination will remove the one obstacle in the way of success with the Exchange in the past—that of controlling distribution—and are happy in the belief that more prosperous days are just at hand.

FOUL BROOD LAW.

I was interested in the fact that bee-keepers in Illinois had to raise money to secure legislation regarding a desirable foul brood law. California secured an excellent law with no expense and very little effort. Why was this? Because Southern California is very generally organized. There are many farmers' clubs. Thus they have tremendous influence. They considered as a whole the matter of legislation, and decided that they needed six laws, one of which was the foul brood law. They went solidly to the Legislature and secured every enactment that they desired.

Every State should have these clubs, and then our farmers could secure their rights, which they have so signally failed to get in the past.

Los Angeles Co., Calif., May 16.

Apiculture in the United States vs. Europe.

BY C. P. DADANT.

I NOTICED and read with pleasure the article on this subject by J. A. Heberly, on page 104. The differences existing between bee-culture in Europe and this country are great indeed. The different opinions relating to hives are mainly based upon the greater or less ease that those hives give for manipulations. The hives in themselves, when of the same size, are equally serviceable in the production of honey, and the bees in a common box without frames will harvest just as much honey as those in the most expensive frame-hive. But the ease of manipulations tells on results, because when an apiarist can examine his bees and supply their wants without difficulty he is more likely to do it when manipulations are impossible or difficult.

The Berlepsch breech-loading hive, which we compare to a cupboard, has made no progress outside of Berlepsch's own country, evidently because its manipulation is more difficult than that of other frame hives. But Mr. Heberly is correct in his statement that in house-apiaries this hive has some advantages, because it opens from the rear. But our American apiarist has little use for the house-apiary.

In Europe generally, Switzerland, France, Germany, the home is often surrounded with walls, often very high walls which were once built to protect the inmates against the depredations of brigands. Though the present conditions of civilization have made those walls unnecessary, yet the customs remain, and in my travels I often saw a new house built with a 12-foot wall around it, like a fortress. This seems natural to the European. To us it is abnormal. One may travel through the greater portion of the United States without being able to see a 10-foot wall. Such walls are exceptional. Here and there a board fence will hide the out-houses, but in most cases the home is left unsurrounded by any obstacle except such as may be necessary to mark the limits of the yard, a shallow picket fence, or, to keep out cattle, a barb-wire fence. So we naturally do not think of defending our bees against intruders.

The house-apiary in Europe is most usually built against a wall, two sides of this wall making two of the walls of the apiary. The expense is thus much less than if the entire structure had to be built purposely for the bees. The temperature of Europe being much more uniform than that of this country a closed house may be used in which the manipulations are conducted even in hot weather without suffering. A bee-house here would have to be adapted to the climate. It would have to be built more as a shed than as a house; most of the bee-handling has to be done when the weather is the hottest, and a closed house would be almost out of the question.

A bee-house with several stories, with openings for bees in every direction, is objectionable, both owing to the bad exposure that some hives would have with flight towards the north, and to the danger of stings from all sides, for it is well known that bees are more prone to become offended at movements of men or animals when directly in front of their entrance. I have seen several house-apiaries discarded owing to these faults. The manipulations are also difficult unless the hives are placed on different floors and entirely isolated from one another. The best house-apiary that I have seen was a shed high enough for a man to stand in, with the roof slanting backward, front to the south, and a tight wall on the north and on each end. The north was provided with two or three doors, so that one might get to any part without having to pass all along the inside. But there was enough space behind the hives to work freely and even to pile some empty hives from place to place. The front was entirely removable at will. This front was in sections, like large shutters, and was entirely closed during the cold days. On warm winter days, and during the summer, these shutters were removed and allowed the air to circulate freely. This made the shed pleasant for work, in fact nearly as pleasant as the shade of trees. But there were drawbacks even in this apiary. The hives had to be placed in close proximity to one another, and this made trouble when the young queens went out for their bridal flight. It is well known that, not only the young queens, but the young bees as well, often make a mistake and enter the wrong hive when the hives are too numerous and alike in appearance, especially if they are crowded together. The mistake of a worker-bee, or even of a hundred workers, has but little importance, but the mistake made by a young queen is of vital importance to the colony, as they usually have no brood of proper age to replace a queen that has not returned from her bridal flight.

Then we have another objection to house-apiaries which is insuperable in many instances. It is when we establish out-apiaries. The bee-keeper who has many bees does not have several farms of his own. So he is compelled, when establishing out-apiaries, to place them on some other man's land, and he does not know how long his bees may remain there. He cannot go to the expense of building a house in such circumstances. We had the experience of this ourselves once. We had a very good friend on whose farm we had had bees for years, and we finally decided to build a bee-shed, feeling sure that we would never be compelled to remove the bees. Within two years, changes happened in that man's family which compelled him to leave the farm and go to live in the city. His home was rented to a tenant, and the management of that tenant was such that we very soon decided to remove our bees.

The European who keeps bees as a business is rare, while here, especially in Colorado, California, etc., he is met everywhere. Land in Europe is high and in great demand. The spot occupied by an apiary is necessarily confined, while in our land we pay but little attention to the amount of space needed. In fact we waste land, and will probably waste it for many years to come, our country being so large. What will do for us is not acceptable to them.

Hancock Co., Ill.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Work Done by the Sisters.

I am just beginning to find out what an amount of work is being done by our bee-keeping sisters. The energy, courage and fortitude displayed by so many of them is truly inspiring, and surely ought to meet with success. Some of the letters I have received were not meant for publication, but they are so interesting and helpful that I trust I will be forgiven for giving all the sisters the benefit of them.

Price of Hives—Removing Honey, Etc.

My experience is very limited in bee-culture. I have seven colonies, and keep them only for home use. I lost two swarms this week, and had ordered hives and they came, but they were not set up, as I had no one who could do so.

The way I take my honey is to take the top of the hive off that holds the pound boxes, and carry it a short distance from the main hive. The bees will all leave and go to the hive again. Then we take the honey and replace new pound boxes in place of the old, and place the top on again. I have not been able to attend to my bees myself of late, having been sick for six months with sciatic rheumatism, and my right arm nearly disabled.

1. What are hives worth there all set up and crated, ready to be shipped, say six at a time?

2. I take my honey only as stated above. How do you take yours? and in what months?

I should like to know more about bees, for I think they deserve all we can do for them. S. M. Payne.

St. Mary's Co., Md., May 22.

Answers.—1. An 8-frame hive, all complete, nailed and painted, and crated ready to ship, will cost you $2.50 at Chicago. The 10-frame is $2.65. These have one super for comb honey.

2. We use T supers to hold our sections, and take each super off any time from June to September, whenever finished.

I hope that troublesome rheumatism is better. A few bee-stings might be of benefit. While the treatment is rather heroic, some claim to have been greatly helped by it. You might try a few by way of experiment.

A Busy Sister.

I like the American Bee Journal ever so much, and what little I know about bees I have learned from the Journal. I have nine colonies. Yes, I do my own work. My husband does not like to be among the bees, and we do our own farm work so far, but the work is too hard for us two. But I hope to have some help so that I can take care of more bees. I do like them, for they are as busy as myself, and the humming is so sweet and healthful.

I have not asked questions because I am so poor a writer, being German, and never having gone to the English school, so I listen to those who do write, and learn that way. There is no one here who likes to tell what he knows about bees. We built a new house last summer, and put a furnace in the cellar. It is nice and dry for bees. Mine came out in good shape this spring, and are working well.

Waupaca Co., Wis., May 24. Louisa Thilke.

Please don't hesitate to ask questions. This department is for you just as much as if you were a good English scholar. Some of us may envy you your knowledge of German.

Again With the Bees.

When we sold our home in Virginia and came to California I was obliged to give up my bees, until about six weeks ago, when I happened on a tramp swarm, as they are termed here, near Arch Beach, in Orange County, where I was staying, and brought them home in a box, then transferred them successfully into a Langstroth hive.

California is a great country for honey, but the last month has been so cold and foggy that the poor bees have had rather hard work. But now the real California weather is here, warm and bright, and as the hills around about us are covered with black sage, followed by several other varieties, and wild buckwheat, there is splendid pasture for them, and I hope for great things from my small colony.

Los Angeles Co., Calif., June 4. Martha White.

A Ranch Bee-Keeping Sister.

I am not much of a hand to ask questions, because if I wait quietly some one always asks just what I want to know, and the bee-keepers have all been very kind to tell me and help me in every way possible. I like the American Bee Journal, and have learned lots of good things from it. I am going to get Dr. Miller's book. I like the way he answers the questions, and I feel as if I were acquainted with him.

I have been keeping bees only a short while. My husband bought 5 colonies and let them out on shares two years ago this spring. Then I helped a little and learned a few things, and I thought that common-sense was a good thing to use. So last year I took them myself, increased them to 31 colonies, but got no honey, as there was no honey last year.

I fed three sacks of sugar, and brought them out nice and strong this spring, and have 64 colonies in good shape. When a swarm came out I went to the hive they came from and cut out all of the queen-cells but one good one, in order to keep down the increase and to keep them strong. I also sent back some small swarms by killing the queen.

Now I am getting ready to extract just as soon as my extractor gets here. I am a little late about it, but I could not get an extractor sooner. I have had to put on two and three supers so as to keep the bees busy. I also tried putting an empty hive under for a new swarm, and they work all right. I have some of them piled up three high, and they are full of beautiful white honey. I expect to have five tons of extracted, and several hundred pounds of section honey, but I do not know exactly how many yet.

Yes, I do all the work and raise chickens, turkeys, pigs, calves, colts, and oversee the whole ranch. My husband is a carpenter by trade, and gets his $3.50 per day. As we want to get ahead this year we thought I could do the work here and let him work at his trade this year. But next year he will stay at home I hope, as his help is needed very much. I am going to increase up to 150 colonies next year, and try to keep that many on hand all the time. I do not want any more than that.

We have a foot-hill ranch of 320 acres, 5 miles from town or neighbors. One small apiary is all there is near us, and that is over a mile. White sage is just beginning to bloom, and I do not think that there is any better honey than that produced.

I like to read the sister bee-keepers' letters and their experiences. I have three children, the oldest a boy of 16. He will help me extract, but the stock takes up most of his time, and my two girls will be lots of help now. Our school is just out, and I am not sorry. I stay alone most of the time, but I do not notice it, because I am so busy all the time. I make frames, get my hives in the knock down and put them together. I had Simplicity hives at first, but did not like them, so I got the Langstroth, and then I built a chicken-coop. Well, I do any kind of carpenter work for anything I need. I think a woman can just do anything she wants to. My husband says that when I get hold of anything I haven't sense enough to let go. But it is just pure stubbornness in me, nothing else. He said he was afraid to leave me with the ranch to run, and everything to do, as it was so hard for me. But I have made out, and now it is vacation, and things will work along fine. I will get everything done up in shape, and in September go to the coast for awhile.

I do not see how our corner in the Bee Journal can be improved, unless the sisters write oftener. I always read that corner first. What I know about bees does not amount to much, but I can learn, and I am going to try hatching eggs over bees, and will let you know about it. If I try it myself then I will know for certain.

Does Mr. York buy honey direct from the bee-keepers? I should like to avoid the middle man.

Riverside Co., Calif., May 22. MARY E. AVERA.

Well! you certainly do have your hands full. You certainly are a helpmeet, indeed. How nice to be able to have the help of your three children—nice for you, and for them, too. I think you are pretty brave to stay alone most of the time 5 miles from town or neighbors. I hope you may be able to take that well-earned trip to the coast in September, and that it may be a very enjoyable one.

I shall watch with interest to learn how those eggs turn out.

I think Mr. York has sometimes bought honey direct from the bee-keepers.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Transferred Colony Deserting or Swarming.

I am having some experience with the bees that is different from anything I have met with before. I am handling bees for some of my neighbors. Mr. H. called me to transfer a swarm from a box to a Langstroth hive. The next day he found them all back in the box, which had been standing a short distance away. I drove them into a small box and cut the comb out and tied it into the frames of the new hive. They appeared to be contented for eight days when they came out and left without settling or even halting. They built two pieces of new comb as large as my hand. Now, please tell me why these things are thus.

GEORGIA.

ANSWER.—It isn't entirely clear from what you say just how matters were. You say you transferred, and the next day cut out the combs. From that I suppose that the first day you merely drummed out the bees into an empty hive, and it would be nothing very strange for them to desert that and return to their old home. I don't know about the swarming eight days later, but if they were transferred and put on their old combs it hardly seems possible they would totally desert, but it looks more like a case of genuine swarming.

Laying Workers—Removing all Queen-Cells.

1. Will you kindly answer, through the American Bee Journal, what I am to do with a colony of bees that has a laying worker? The hive is full of drones, also quite a number of workers.

2. What will be the consequence of removing *all* queen-cells from a colony that eight days previous had cast a swarm? Will the colony have to be re-queened?

IOWA.

ANSWERS.—1. The hive being full of drones, there are probably not many workers, and the few that are left are quite old, so the best thing is to break up the colony, distributing the combs, bees and all, to other colonies.

2. Very likely the colony would be all right, for a young queen may have hatched already, but if no young queen has emerged the colony will be hopelessly queenless.

Queen Mating Twice.

Thirty years ago I was a breeder of Italian queens in Indiana. I have seen many queens leave the hive on the bridal trip, but never knew nor heard of one leaving the hive on two days in succession, and in both cases leaving unmistakable evidence of a successful trip. Did you ever know of such a case?

The way I came to know this to be true was by seeing a queen in May, just past, leave the hive and return. The next day, about 2 p.m., I was taking the drones out of a trap that I had set at this particular hive, as I did not want it heavily stocked with drones now, that this young queen had made her bridal trip. While clearing out the trap this same queen flew down upon the landing of the front of the hive and went in and leaving, as on the previous day, positive evidence of a successful trip.

I call attention to this in order that if it is common persons should not destroy the drones until the queens begin to lay eggs. KANSAS.

ANSWER.—No, I never had any such case come under my observation. I have read of one or more cases occurring across the ocean, but I think this is the first case I ever heard of in this country. The case is interesting for its rarity, but I think it is of such infrequent occurrence that it need not make any difference as to the keeping of drones. Possibly, however, it is of more frequent occurrence than I think.

Keeping Bees—How, Why, and What For?

1. How do *you* keep bees?
2. *Why* do you keep bees?
3. Would you advise *me* to keep bees? If so, *what for?*

WASHINGTON.

ANSWERS.—1. Your question is such a comprehensive one that it is impossible to find room for a full answer in this department. Indeed, I have written a whole book in trying to answer the question, and it is none too fully answered then. Answering in the most general way, I keep bees in dovetailed hives and run for comb honey. If you will specify any particular point you want me to tell about, I'll be glad to answer further.

2. Partly for the enjoyment of it, partly for the money in it, and partly for the intense interest in unsolved problems all the time coming up in connection with the pursuit.

3. I don't know. I'd like to get pretty well acquainted with you before answering. You might invite me to spend a fortnight with you at your home when I have leisure, so as to learn something of your habits, tastes, and capabilities. But then I hardly expect to have the leisure short of twenty years, and you might not want to wait so long. Answering the last part of your question first, you might want to keep bees for the sake of your health, if you are kept indoors most of the time; if your taste runs strongly in that direction you might keep a few for pleasure; if you

are in a good locality for bees with no bee-keeper near, and are rightly built for business, you might go into it for profit; you might also go into it for the sake of having honey of your own producing constantly on the table. Taking your question as a whole, if the ground is already occupied by other bee-keepers located within a mile or two, it is hardly advisable for you to trespass on their preoccupied territory. If the way is clear, and you are impressed with the idea that you might be of the right material for a successful bee-keeper, try it on a small scale, beginning with not more than two or three colonies, and actual experience will tell better than the most experienced bee-keeper can tell by guessing at it, whether you can be successful or not.

◆

Shaken Swarm Without the Shaking.

About two weeks before the white honey-flow was expected I placed under some of my strongest colonies hives containing full sheets of foundation and combs. Then a few days before the honey-flow I made some frames just the size of the hives, of "parting stop" (a strip of wood ½x⅞ inches), mitered at the corners, and covered these frames with galvanized-wire screening, all but one corner, where I put a piece of queen-excluder containing just one hole. Then where the queen had not commenced to lay in the lower hive I placed one of the frames from the upper hive containing the least brood, eggs, etc., and put the empty comb in the place of it. Then with little smoke I drove nearly all the bees below; put the wire-screen over the lower hive, and the upper hive above. I examined them in three days, and in every case found the queen was below and filling every frame full of eggs, just as she would do if it was a newly-hived swarm, and enough bees were going up through that one hole to care for the eggs and brood above. Then I placed a super on the lower hive, with either drawn comb or foundation in the boxes, and placed the upper hive and screen above the super. Now—

1. Isn't this practically a shaken swarm without the shaking?

2. Won't I avoid swarming?

3. Will they store surplus honey in the super, as it is nearest their brood-nest, or will they go to the trouble of taking it up through that one small hole, away back in one corner, and filling those old combs? They have shown no disposition to start queen-cells in the upper hive. I think it is because of the screen. If everything works right I intend to drive them all below in 21 days, and pile on the supers, of course watching them in the meantime and giving them plenty of super-room.

We, in this part of Iowa, look for a grand white clover honey harvest this year. IOWA.

ANSWERS.—In this case I feel very much more like asking then answering questions, being very much interested in the outcome of your experiment, and would rather say I don't know, and ask you to tell us after you've been through the mill. But if you promise faithfully to report after the experiment is finished, I'll answer as well as I can.

1. It is certainly very much like it, but also like a plan given by G. W. Demaree years ago, only he used the ordinary queen-excluder instead of the wire-cloth or screening, and I suspect that makes a decided difference as to the promptness with which the bees begin work below. That is, I think they will begin work much more promptly with your plan than with the excluder. The Demaree plan is simply to give an empty story under the full one, with an excluder between, putting the queen in the lower story. The bees easily going up through the excluder, the queen does not lay in the lower story generally for two or three days, and Delos Wood reports that with him the plan is an utter failure, the queen not laying at all. In your plan, however, you have so little connection between the lower and the upper story that the bees which have been smoked below probably feel about the same as if there were no brood above, so that after all they are much like a shaken swarm.

2. I am inclined to think you will. Be sure to tell us when you know.

3. I don't know, and I want very much to learn about it from you.

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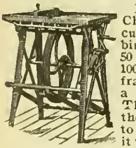

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FROM MANY FIELDS

Bees Doing Well.

Bees are doing well here this year. Some honey has already been taken off. There were very few swarms, and they were the earliest I ever saw, coming in April and the first of May; none after May 10. C. A. WOMACK.

Mecklenburg Co., Va., June 16.

Heavy Loss of Bees.

Over 50 percent of our bees in this county have spring-killed, and the balance are very weak. The honey crop will be very small this year in this country. ANDREW NELSON.

Emery Co., Utah, June 17.

Prospect for a Good Crop.

Bees are doing fine just now. There is every prospect for a good honey crop in this locality. P. H. DAVIS.

Hennepin Co., Minn., June 16.

Favorable Season—Drones—Laying Queens.

The weather in eastern Ontario has not been favorable for a honey crop so far this season. Between April 4th and June 11th, we had practically no rain, only about ⅛ of an inch fell in all that time. However, there was an extraordinary crop of dandelions from which the bees got enough to keep up breeding. There was also a very good fruit-bloom for a few days. The bees have worked more on red clover here this season than I ever knew them to do before. I presume it is on account of the smallness and shortness of the clover blossoms, as the result of the dry weather which permitted them to reach the bottom of the nectar cell. They are also work-

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ing largely on wild mustard, which grows among the grain on many farms in this section. I was not aware that the honey-bee worked to any extent on this plant.

On the 11th and 12th inst. we had a glorious rain, and the weather has been cool and moist since. White clover is appearing in considerable quantities, and if weather conditions now continue favorable we expect to be into the honey-flow about next week.

I put on my section supers last week. Three of the colonies are working like Trojans in the sections; the others seem a little lazy at starting.

Tell Dr. Miller that my colony with laying workers didn't have any laying workers, after all, but it had a drone-laying queen—a late arrival last fall, I suppose. When you wrote me that you could not supply me with a queen for some weeks, I simply pinched her head off and set the hive over another colony, which was not very strong in bees. The two together made a splendid colony, and the new arrivals did not molest the other queen; in fact, she has done far better work since I united them than before. W. A. HANNA.

Ontario, Canada, June 16.

Not a Promising Season.

With us during fruit-bloom the weather was rainy, and the locust trees failed to bloom, therefore a considerable source for honey was a failure. Basswood is scarce, and white clover not abundant. W. R. YOUNG.

Frederick Co., Md., June 13.

Italians vs. Blacks—Great Breeders.

On page 365, Geo. B. Whitcomb is prepared for, was, and is expecting, the support of G. M. Doolittle, but I will send him a shell or two, and after the smoke has cleared away he will see that "foxy old grandpa" is on the other side.

In the first place, Mr. Doolittle has Italian queens that are equal to any queens in America, and he would not exchange one of his Italians for a half-dozen blacks. Nor does he agree with Dr. Gallup on his umbilical-cord theory. In fact, the best authority gives it a black eye.

Now, as to Mr. Alley's queens, I have never seen any of them, but I am satisfied that the queens were all right when they were mailed, but nearly if not all queens are injured to some extent in shipping through the mails. I have never had a queen from a distance that was any good, but I use them as breeders only, and rear as good queens from them as can be found in America.

Now, Mr. Whitcomb, get yourself a pure Italian queen, and rear a lot of queens from her and requeen your apiary with them, and you will have no more use for blacks.

Now, while my gun is loaded, I will fire a shot at A. C. F. Bartz. On page 360, Mr. Bartz, in speaking of stimulating brood-rearing in spring, says the bees having been out of the cellar about a month or more, four or more combs are being filled by the hundreds every minute. Now, look here, hundreds of bees hatching every minute four or more combs—hundreds means at least 200, so 200 every minute means 288,000 bees in 24 hours, or 5,948,000 bees in 21 days. That's very good, Mr. Bartz, for a queen with four or more combs. A. S. ANDERSON.

Kendall Co., Tex., June 14.

Transferring Bees—Saving Combs.

On page 376, Miss Rebecca Halley describes how she transferred a colony of bees. No comb or brood was transferred, but comb foundation was offered as a starter, and, of course, something of an inducement to the bees to occupy a new home.

I have transferred hundreds of colonies from all manner of cavities, such as trees in the forest, round log hives, board box-hives, etc. Oftentimes the comb was worthless, or about so, except such as contained brood often hatching in large numbers. To transfer this for the double purpose of saving the young bees and serving as an inducement to the bees to occupy their new home I deem good economy, even if the comb is too poor to be of value in the hive after the young bees have hatched and the colony is permanently and satisfactorily established in their new quarters. For it can then be removed, and comb foundation can be substituted.

My method of fitting such old comb in the frames is to lay the frame on a board where the pieces of comb can be fitted in by straightening their edges with a knife, and I have used as many as a dozen pieces to fill one frame. To hold them in position I use splints not to exceed $\frac{1}{4}$ of an inch in diameter, cut so as to extend about $\frac{1}{4}$ of an inch above and below the top and bottom-bars. These splints are notched at each end and wired together. I have put on as many as six pairs of splints on one frame. The bees will weld the comb together in two or three days, and fasten it to the frame, after which the splints should be removed, if it is intended to let the combs remain after the brood has hatched.

But because comb is dark only it should not be condemned, as it is often valuable. I have frequently found good worker-comb full of brood in sheets that would fill a standard Langstroth frame, which would contain about 3,000 bees, and were well worth saving, even if the comb is discarded as soon as the brood has emerged.

The matter of first driving the bees out of the old hive is of much importance, which can be readily accomplished by turning the old hive mouth up; putting a box or a nail-keg over the mouth of the hive will answer a good purpose to hold them until the comb is transferred to the new hive and placed on the new stand, where the bees can be hived as we hive any natural swarm, and they will not desert it.

G. BOHRER, M. D.

Beedom Boiled Down

Brood-Rearing in Cuba.

A. I. Root, who is at present amusing himself watching his 500 colonies in Cuba, reports this in Gleanings in Bee Culture:

> We have found trouble so far in getting the bees to rear brood in the winter time. The weather is certainly warm enough, and pollen is coming in great plenty; but the brood-nest is apparently so filled with honey that the queen can not find a place to deposit eggs. I have been very reluctant to accept this as an explanation; but other bee-keepers assure me such is the case, and some of them say our red-clover strain is worse than any other in thus filling every empty space with honey. I have suggested getting hybrids, or, better still, some of the Syrian or Holy Land bees, that are such *persistent* rearers of brood in season and out of season; but the objection is made that they swarm so much the remedy is worse than the disease. All agree the red-clover bees are the fellows for honey if we could only keep up the population of the hives. Throwing out the honey with the extractor seems to be the only remedy, and some seem to think the great objection to producing comb honey here is the filling of the brood-nest with honey so no young bees can be reared.

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>
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cement is the only cheap material that will furnish the warmth of the earth without the moisture of the soil or water surrounding it.

A dry room surrounded by the warm earth must be depended upon in order to allow the central upward ventilating flues. It is alone by them that dry, fresh air can at present be supplied in sufficient volume to meet the demand of the bees. My three flues are all wide open now; and the bees are not roaring because they have or have not a "sniff" of the spring air.

These three flues have a superficial area of 716 inches, equal to one flue about five feet wide by one foot thick, reaching up into the air sixteen feet.

The Queen's Retinue.

That retinue surrounding the queen is something after this fashion in this locality:

Under normal circumstances, when a queen is traveling over the comb, no worker accompanies her. If she runs against the hind end of a worker, the worker will pay no more attention to her than to another worker. If, however, the worker is in such position that she can recognize the presence of the queen, whether the queen touches her or not, the worker will invariably squarely face the queen; and if the queen stands still *long enough* there will be a circle of bees all facing centrally. As soon, however, as the queen moves on, the circle breaks up, never to be formed again of the same bees.—Gleanings in Bee-Culture.

Uniting Weak Colonies.

The following discussion upon this topic at the Ontario convention is taken from the Canadian Bee Journal:

Mr. Chrysler—In August or the first of September, I simply set one on top of the other for a few days and get them all in one hive-body; if they needed feeding for the winter I would feed them then. I would pay no attention to the queens; they settle that themselves.

Mr. Dickenson—Unless you knew one queen was better than another?

Mr. Chrysler—Oh, certainly.

Mr. Byer—Wouldn't a number of bees go back to their old stand?

Mr. Chrysler—I wouldn't care very much for that.

Mr. McEvoy—Did I understand Mr. Chrysler to say he simply set one on top of the other and unite them?

Mr. Chryster—I would set them on top of one another and let them be like that for a few days when I would come along again and dispose of the frames not occupied and get them all in one hive-body; they would be one colony then.

Mr. McEvoy—I would get the bees to fill themselves pretty thoroughly upon their own stand and do the work in the evenings as late as I could do it and then unite them at once. I would raise the hive 2 or 3 inches from the bottom and shake the bees down and let them run in and give them a fair smoking so as to knock all the fight out of them.

Mr. Heise—I go to the hives I wish to unite and remove all the frames except just what the bees occupy; I do that one evening and the next evening I come along and generally lift three out of one hive and place them in the other, leaving space for one frame between; let them remain on those for three or four days or a week and then I put the rest of the frames in and I have never noticed any fight.

Empty or Filled Frames for Forced Swarms?

J. F. Crane says, in Gleanings in Bee-Culture:

If we shake our bees into an empty hive there will be a loss of ten days to two weeks (usually), unless they are very strong, and honey very abundant, before they will do much in the surplus apartment. Some writers say they can get more surplus honey when a swarm is compelled to build combs in the brood-chamber than when given founda-

Prize=Winning Stock

Daughters of Moore's famous long-tongued red clover Italian Queen, which won the $25.00 prize offered by The A. I. Root Co. for the longest-tongued bees; and also daughters of other famous long-tongued red-clover breeders whose bees "just roll in the honey," as Mr. Henry Schmidt, of Hutto, Tex., puts it, now ready to go by return mail. Untested Queens, 75c each; six, $4.00; dozen, $7.50. Selected Untested, $1.00 each; six, $5.00; dozen, $9.00. Safe arrival and satisfaction guaranteed. Circular free.

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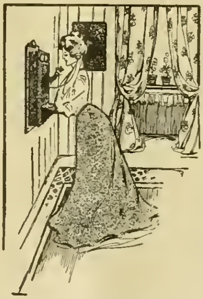
Rural Telephones—Telephones are becoming very common in rural communities and the more they are used the greater their appreciation. The low cost of maintaining a service of this kind makes it possible for those who are in even very moderate circumstances to have telephone connection with their neighbors and with neighboring towns.



It may safely be said that the telephone has solved more problems than any other invention of modern times. It has made farm-life more attractive and brought into close communication those who have formerly been widely separated. It is now a common thing to have daily conversations with friends or relatives who live many miles away and where formerly exchange of friendly greeting or consultations concerning business was a matter of considerable time and a journey of several miles; it is now a matter of minutes and of going to a telephone in the house.

In the matter of business alone any farmer can well afford to pay the small cost of a telephone, for there will be dozens of times during the year when he can make or save money by being in almost instantaneous touch with his market town.

Putting in operation a telephone line is very simple. Any one can do it, and it requires no special skill to keep in repair and operate a line. There are numerous makes of telephones for rural lines on the market, but the ones made by the Stromberg-Carlson Telephone Mfg. Co., Chicago, Ill., is having the largest sale and is giving the best satisfaction. This is one of the oldest houses in this line in the country, and the telephones made by this Company have been found to be perfect in their adaptation to the uses of people in country places.

The Company publishes a very interesting Catalog, and we would advise our readers to send for one, and see for themselves how easy it is to "get on the line." Address, Stromberg-Carlson Telephone Mfg. Co., F 4, Chicago, Ill., and do not forget to say we invited you to do so.

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tion or combs; but that is not my experience. In 1901 I gave six or eight shaken swarms, that were very strong, brood-frames having only starters or half an inch of foundation under the top-bar; but I found such did not store nearly as much surplus as those given full sheets of foundation or old combs; and out of all there were not half a dozen good brood-combs—nearly all was drone-comb. So I find it much better to "shake" on to full frames of foundation well wired to shaking into empty hives.

But foundation has its drawbacks or disadvantages, or is not wholly satisfactory as a preventive of swarming. During the present season I shook some fifty or sixty colonies into hives with foundation. Some eight or ten of these swarmed out a day or two later, some of them without touching the foundation, while others drew it out a little and then decamped.

As my queens' wings were all clipped, some of the queens returned with a few bees with them while other colonies remained silent. Where the bees are content to stay on foundation they usually do well, although, if the queen is old or poor, they will frequently start a little brood and a few queen-cells, and then swarm again.

I have had the best results from "shaken" swarms when shaken on to old combs carried over from the previous year, or from hives where the bees died during the winter or spring. If these combs contain considerable honey it does no harm. I think I should prefer to have them about half full of honey. Last year I gave one such forced swarms a hive full of combs that were nearly solid with honey, and they did nicely. But if the combs are quite free of honey, and if you have a good-sized swarm, and honey is plentiful in the fields, they will soon have enough.

Spreading Brood.

This is practiced after the following fashion by the Texas editor of the Progressive Bee-Keeper:

> We will take a normal colony at the opening of spring and as soon as we find that the queen has brood in two frames we will select two nice combs that are about one-third full of honey at the top and will set two of these combs one on each side of the two frames of brood; thus we will have two frames in the center of brood, the one next on each side partially empty, and beyond these the two combs of pollen.
>
> In about two weeks we will return to this colony and we will find that the queen has extended her brood, and now has four frames filled. We will proceed as before and slip in two more combs next to the four containing brood, always moving the pollen-combs towards the walls and finally making use of them for brood. Now, by the time the queen has the six frames full of brood we may expect that the two middle ones are about full of eggs again, the first eggs laid therein have hatched out. At this juncture, just as the queen begins filling them the second time, if we will insert, between the two middle combs, empty combs, they will be filled at once with eggs, and fuller than they would be filled if placed on the outside. There is one great truth to learn in spreading brood, and that is that we must not chop brood, and by this I mean placing empty combs in between combs of capped brood, or the giving of combs faster than the queens can fill or the bees keep warm.

Hiving Extraordinary—A True Story.

The following novel plan was adopted by an old skeppist, owning, at least, 170 colonies of bees:

One hot day at the end of June several swarms issued simultaneously, and the bee-man had only three empty skeps, which would not hold one-half the bees. So, feeling sure that many other swarms would turn out during the day, he emptied the second lot in question into a sack and tied them up. Later the same day, as expected, many others (he could not say how many) of his numerous skeps followed suit, and the swarms were treated in the same way. Then he sent for more skeps, and ordered a long stand. When these came home a few days after, he untied the sack and laded out the bees with a hand-bowl. In this way nine skeps were filled, all of which were placed on the stand. This done, he turned the sack inside out and shook it! "Now, guv'ner" (he said, when I called a few days ago), "how is it them bees wouldn't bide? Every blessed skep was empty within a week. I *knows* there was £10 worth of bees went away." Then he added, "It's the wust season I ever knowed—stifled 50 lots an' only got 7 cwt. of honey."—A COUNTRY PARSON, in the British Bee Journal.

How Shall Bee-Statistics Be Gathered?

S. E. Miller thinks we should invoke the aid of the general government. He says in the Bee-Keepers' Review:

> In regard to a honey crop report, I think we should direct our energy toward the Department of Agriculture. I think that if the importance of this matter were fully shown up to the Secretary of Agriculture he would not hesitate to incorporate a honey report along with the regular crop report, as now issued. The National Bee-Keepers' Association would have to furnish him the names of intelligent bee-keepers throughout the country who would be willing to report regularly each month. No doubt they would be ex-

**Italian Queens,
Bees and Nuclei.**

We have a strain of bees bred specially for honey-gathering and longevity, at the following prices:

One Untested Queen.....$ .80
One Tested Queen 1.00
One Select Tested Queen. 1.25
One Breeder Queen 2.00
One-Comb Nucleus (no Queen)................ 1.10

Queens sent by return mail. Safe arrival guaranteed. For price on Doz. lots send for catalog.

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BOYS WE WANT WORKERS Boys, Girls, old and young alike, make money working for us. We furnish capital to start you in business. Send us 10c stamps or silver for full instructions and a line of samples to work with. **DRAPER PUBLISHING CO., Chicago, Ill.**

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Catnip Seed Free!

We have some of the seed of that famous honey-producing plant—Catnip. It should be scattered in all waste-places for the bees. Price, postpaid, 15 cents per ounce; or 2 ounces mailed FREE to a regular subscriber for sending us one NEW subscriber to the Bee Journal for one year, with $1.00; or for $1.20 we will send the Bee Journal one year and 2 ounces of Catnip seed to any one.

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HIGH-CLASS QUEENS.—Buckeye Strain Red Clover Queens, they roll in the honey while the ordinary starve.

Muth Strain Golden Italians, None Superior. **Carniolans,** None Better.

We guarantee safe arrival by return mail.

APRIL, MAY, JUNE.

Untested ....$1.00 each; 6 for $ 5.00
Select Untested ... 1.25 each; 6 for 6.00
Tested .... 2.00 each; 6 for 10.00
Select Tested ..... 3.00 each; 6 for 15.00

Best money can buy...........$5.00 each.
2-frame Nuclei with Select Untested Queen $2.75

Send for Catalog and see SPECIAL INDUCEMENTS.

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This foundation is made by a process that produces the superior of any. It is the cleanest and purest. It has the brightest color and sweetest odor. It is the most transparent, because it has the thinnest base. It is tough and clear as crystal, and gives more sheets to the pound than any other make.

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Catalog giving FULL LINE OF SUPPLIES with prices and samples, FREE on application.

GUS. DITTMER, Augusta, Wis.

DAIRYMEN ARE DELIGHTED to meet those who work for us. Cow keepers always have money. We start you in business. You make large profits. Easy work. We furnish capital. Send 10 cents for full line of samples and particulars.
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Fourth of July

rates via the Nickel Plate Road. One fare for the round-trip, July 3d and 4th, within 200 miles of starting point. Return limit July 6th. Chicago Ticket Offices, 111 Adams St., and Auditorium Annex. 'Phones Central 2057 and Harrison 2208. 12—25A3t

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pected to report on all agricultural crops at the same time. This would be very little additional expense to the department of Agriculture, compared to what it would cost the National Bee-Keepers' Association to gather it and print it for distribution, as the cost of postage alone would be a large item to the latter.

Pear-Blight, Ants, and Bees.

Editor Root makes a case against the ants as the carriers of pear-blight, exonerating the bees. He says:

> The statement is made in American Gardening, referring to pear-blight, that the blighted twigs exude a milk-white liquid; that this fluid the bees are likely to get and spread to the flowers of healthy twigs which they may visit. The bees would have no occasion for sucking up the virus, and there is no use in laying the blame on them, where common ants (very numerous in California where the blight is the worst) crawl all through it and thence all over the trees. While the bees may spread the virus from a diseased to a healthy blossom, it is extremely improbable that they should seek out the poisonous sap from a diseased twig.
>
> While I was in California looking through those great pear-orchards, so fearfully blighted, I saw ants in great numbers crawling all over the diseased and healthy twigs, and some of the twigs were covered with that deadly milky fluid. I believe the time will come when it will be proven that the bees are not the chief means of spreading the blight; that those ever-present ants, that are continually crawling over the trees from top to bottom, will be declared to be the real culprits.—Gleanings in Bee-Culture.

Close Saturdays at 1 p.m.—Our customers and friends will kindly remember that beginning with July 1, for three months we will close our office and bee-supply store at 1 p.m. on Saturdays. This is our usual custom. Nearly all other firms here begin the Saturday afternoon closing with May 1st, but we keep open two months later on account of the local bee-keepers who find it more convenient to call Saturday afternoons for bee-supplies.

CONVENTION NOTICE.

Texas.—The Texas Bee-Keepers' Association meets in annual convention at the Agricultural and Mechanical College, at College Station, Texas, July 7 to 10, inclusive, during the Texas Farmers' Congress meetings. Cheap excursion rates. Large crowds. A good time. Learn a heap. Meet your fellow-men, and talk. Exhibits of all kinds of stuff. Premiums of all kinds awarded. Come, and bring what you have, and take home some of the premiums. You are invited. Be sure to be there. July 7 to 10. 1903, at the A. & M. C. of Texas, College Station.
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Golden and Honey Queens.

July and August.	1	6	12
Honey Queens (Untested)..	$ .75	$ 4.00	$ 7.00
" " (Tested)....	1.25	6.00	11.00
Golden " (Untested)..	.75	4.00	7.00
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2-frame Nucleus (no queen)	2.00	11.00	21.00

Breeders, $3.00 each, after June 1.

Add price of any Queen wanted with Nucleus.
Our bees are shipped in light shipping-cases. Purchaser pays express on Nuclei.
Safe arrival guaranteed of all stock sent out.

BATAVIA, ILL., Aug. 21, 1901.
Dear Sir:—I thought I would let you know as to results of the nucleus sent me. They were placed in 10-frame hives and now they are in fine condition. From one I removed 24 pounds of honey and had to give 6 of them more room, as they were hanging out. They have more than reached my expectations.
Yours respectfully, E. K. MEREDITH.

DAVENPORT, IOWA, Dec. 31, 1901.
Your queens are fully up to standard. The honey queen that you sent my brother takes the lead. She had a rousing colony when put up for winter. The goldens can be handled without smoke or veil. Very truly yours,
JOHN THOEMING.

Notice.—No tested stock sent out before May 15. Send money by P. O. Money Order or Express Order. **D. J. BLOCHER,**
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Hives, Sections, Foundation,
etc. We can save you money. Send list of goods wanted and let us quote you prices. ROOT'S GOODS ONLY. Send for Catalog.
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Wanted, to Buy
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This is a true story of the poor and unfortunate in city life. Miss Horton, the author, is a deaconess whose experiences among the city poverty stricken are both interesting and sad. This particular short story—60 pages, 5x6¾ inches, bound in paper cover—gives somewhat of an insight into a little of the hard lot of the poor. Price, postpaid, only 10 cents (stamps or silver.) Address,
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This Emerson stiff-board Binder with cloth back for the American Bee Journal we mail for but 60 cents; or we will send it with the Bee Journal for one year—both for only $1.40. It is a fine thing to preserve the copies of the Journal as fast as they are received. If you have this "Emerson" no further binding is necessary.
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HONEY AND BEESWAX
MARKET QUOTATIONS

CHICAGO, June 5.—The market is lifeless, no movement except extracted at low prices. Best grades of white extracted, 5½@6 cents; amber, 5@5½c. Comb honey is held at 15c for choice white, and anything not grading up to meet this requirement sold at 2@5c less per pound. Beeswax, 32c. R. A. BURNETT & Co.

KANSAS CITY, June 9.—No comb honey in our market. White or light amber would sell quickly at $3.50 for 24-section cases. Demand light for extracted, at from 5½@6½c. Beeswax in demand at 25@30c. C. C. CLEMONS & Co.

ALBANY, N. Y., June 20.—Honey market quiet here; prices nominal and light receipts. We quote light comb, 15@16c; mixed, 14@15c, Extracted, white, 6½@7½c; amber, 6@6½c; dark 5½@6c. Beeswax, 31@32c. H. R. WRIGHT.

CINCINNATI, June 1.—Very little change in market from last report. We quote amber extracted grades at 5½@6½c in barrels; white clover, 8@9c; supply equal to demand. Comb honey, 15@16c for fancy. Beeswax, 30c.
THE FRED W. MUTH CO

NEW YORK, May 21.—Comb honey trade exceptionally quiet, very little doing. Fancy stock not plentiful and is sold at 14c. A large supply of other grades on hand, which we are quoting at from 11@13c, according to quality and in large lots make concessions from these prices. Extracted, unusually quiet, and prices show a downward tendency all along the line. Beeswax, firm at from 30@31c.
HILDRETH & SEGELKEN.

CINCINNATI, June 8.—We have reached the time when there is no settled prices in the honey market. Everybody is waiting to learn how the crop will turn out, therefore we will sell or ask the old price; fancy water-white comb brings 15@16c. Extracted, amber, in barrels, 5¼@5½c; in cans, 6@6½c; white clover, 8@8½c. Beeswax, 30c. C. H. W. WEBER.

WANTED WHITE CLOVER EXTRACTED HONEY!
Send sample and best price delivered here; also Fancy Comb wanted in no-drip cases.
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WANTED!
CALIFORNIA COMB HONEY in car-lots. It will pay you to correspond with us.
THOS. C. STANLEY & SON,
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WANTED—Extracted Honey.
Mail sample and state lowest price delivered Cincinnati. Will buy FANCY WHITE COMB HONEY, any quantity, but must be put up in no-drip shipping-cases.
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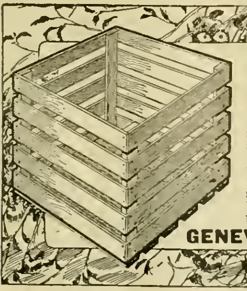

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are no better than those we make, and the chances are that they are not so good. If you buy of us **you will not be disappointed. We are undersold by no one.** Send for new catalog and price-list and free copy of THE AMERICAN BEE-KEEPER; in its thirteenth year; 50 cents a year; especially for beginners.

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Fourth of July Excursion

over the Nickel Plate Road at one fare for the round-trip, within a radius of 200 miles from starting point. Tickets on sale July 3d and 4th, with return limit of July 6th. Through trains daily in each direction between Chicago, Cleveland, Buffalo, New York, Boston, and intermediate points. Every facility offered for the comfort of the traveling public. Individual Club Meals, ranging in price from 35c to $1.00, and meals a la carte, in dining-cars on Nickel Plate Road. City Ticket Offices, 111 Adams St., and Auditorium Annex. 'Phones Central 2057 and Harrison 2208.

13—25A3t

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Catalog Price on

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Up First Flight.

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Why does it sell so well? Because it has always given better satisfaction than any other. Because in 25 years there have not been any complaints, but thousands of compliments.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

Bee-Keepers' Supplies OF ALL KINDS *****

Very fine pure-bred **BARRED PLYMOUTH ROCK** Chickens and Eggs for sale **at very low prices.**

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The classic in Bee-Culture—Price, $1.20, by mail.

BEESWAX WANTED at all times.

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THE JUNE FIRST NUMBER OF

Gleanings in Bee-Culture

HONEY
PURE
AIKIN
COLO

contains two very interesting articles, both of which are fully illustrated with new views, to-wit,

Bee-Keeping in Jamaica

—AND—

Glimpses of Cuban Apiaries.

Page 516 of this issue contains a price-list of the NEW

Aikin Honey-Bags.

This new package for the putting up of Extracted Honey was fully described in the Mar. 1st number by Mr. Aikin. This is something that should interest every producer of liquid honey.

Gleanings one year and one Untested Italian Queen, $1.00. We are mailing these promptly. Gleanings 6 months, 25 cents.

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Nat'l Bee-Keepers' Convention at Los Angeles, Aug. 18-20

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WEEKLY

MR. J. A. WEISSENFELS AND APIARY, OF PULLMAN, WASH.

THE AMERICAN BEE JOURNAL

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1st.—To promote the interests of its members.
2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

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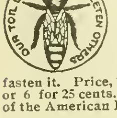
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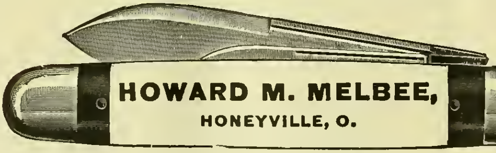
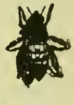
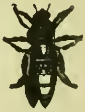
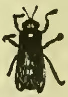
Your Name and Address on one side—Three Bees on the other side.









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ESTABLISHT IN 1861
AMERICAN
BEE JOURNAL
THE OLDEST BEE-PAPER IN AMERICA

43d YEAR. CHICAGO, ILL., JULY 9, 1903. No. 28.

Editorial Comments

The Value of a Purchased Queen is not a thing always readily determined. If you get a queen represented to be of the best stock, and you do not find her to do as good work at laying as your average colonies, do not be in haste to condemn her. Rear queens from her, and see what their worth will be. Sometimes it happens that a queen, which has been doing excellent work, turns out after a journey in the mails to be a very poor layer. That, however, may have no real bearing on her value as a breeder, and young queens reared from her may be as good as if she had never been in the mail-bags.

Self-Spacing Frames may and may not be a good thing. As in other things, something depends upon the purpose for which they are used, and the management. In the present number Leslie Burr enters an earnest protest against them for use in extracted-honey production. In his case the exception is well taken. Whether to be used in Cuba or further north, frames that are to be used part of the time at one distance and part of the time at another, should not be self-spacing. For the term "self-spacing" may be considered practically synonymous with "fixed-distance," and such frames are not desirable to be used except at the one distance suggested by the arrangement for automatic spacing. For those, however, who use the same spacing in the extracting-super as in the brood-chamber, or whose extracting frames are distinct from the brood-frames, as well as for comb-honey producers, fixed-distance frames offer advantages not lightly to be esteemed.

Something About Average Yields Per Colony.—There is no question that there is such a thing as overstocking, and that in general the yield per colony will be increased by decreasing the number of colonies kept. In a place where white clover is the chief pasturage, there might be enough to keep a hundred colonies busy while the white clover bloom lasted. Suppose each colony should store 100 pounds from white clover. Under the supposition that each colony had all it could do, the yield of white clover honey would not be at all increased per colony if any smaller number than 100 colonies were kept. Whether 100 colonies be kept, or only a single colony, the number of pounds of clover honey gathered by each colony would be the same, although the total crop would be decreased in proportion to the decrease of colonies.

But on the supposition that 100 colonies could keep all the clover nectar licked up, then 101 colonies could not average as many pounds as 100. Not only that, but there would be an actual falling off of the total crop, by the amount of honey used by the additional colony for its own consumption. If, now, we keep increasing the number of colonies, we will keep decreasing both the total yield and the yield per colony, until we reach that point where there will not be a drop of surplus, the bees requiring all they gather for their own consumption.

But another factor comes in to be considered—the scattering honey-plants aside from the clover. Under some conditions these will make so little difference as to be scarcely worth considering, while under other conditions they may make such a notable difference as to mislead the novice greatly. Suppose these scattering plants give a continuous yield throughout the whole season—say five months—but suppose the yield so small that two colonies can take care of the whole of it. If these two colonies are all that are on the field, then instead of being limited to about five weeks on the clover, they will have five months in which to store, or four times as long. Each one ought then to store four times as much as if confined to the clover, or 400 pounds.

Right here is where the novice is misled, for he is pretty sure to figure that with ten times, or fifty times, as many colonies he will have ten or fifty times as much surplus. Whereas, as soon as his apiary of two colonies is increased to six, he will find his average yield per colony just cut in two, and constantly diminishing with further increase.

Bees Poisoned by Yellow Jessamine.—C. S. Harris has a location in Florida where this plant is abundant, in several places covering nearly an acre of ground, and he says in the American Bee-Keeper:

> When I began keeping bees here and discovered, in the spring, great numbers of bees dying and dead in front of the hives, I supposed they were stricken with paralysis, and yet the symptoms did not appear exactly like those of that disease. Most of the affected were the just-hatched, downy ones, and they had no trembling motion, but seemed stupefied or intoxicated. The old bees affected had the distended, shiny appearance of bee-paralysis, it is true, but ordinarily they were few, except in queenless colonies, or where, for any reason, but little brood was being reared. Very fortunately the queens are seldom affected.
>
> After a few seasons I found that this trouble made its appearance with the jessamine bloom, from which the bees stored some honey and considerable pollen, and disappeared entirely with the end of that bloom. One point that made this more noticeable was that the blossoming of this vine is a movable period, varying with the season from December to March, and even April, remaining in bloom from four to six weeks. I have discussed this trouble with several physicians, and all of them say it is undoubtedly jessamine poisoning, having almost the same action upon the bee as the poison extracted from the root of the vine has upon the human system.

Formaldehyde.—An al-de-hyde is an *al*-cohol *de-hyd*rogenated, and, as a rule, an alchol is transformed into aldehyde when it loses two atoms of its hydrogen. Methyl alcohol ($C\,H^3\,O\,H$) when deprived of H becomes $C\,H\,O\,H$, called formic aldehyde, because it very readily changes to formic acid ($C\,H\,O\,O\,H$). Shortening the term "formic aldehyde," we have *formaldehyde.* It is largely used under the name of formalin, which is a 40 percent preparation put up by the Schering Chemical Works. It is probably the most destructive germicide known, although having little effect upon animals or man, the fumes being breathed, it is claimed, with little inconvenience. Yet it can hardly be a wholesome article of diet, for the doctors of Chicago object bitterly to its use in milk to keep it from souring, saying that such milk is death, slow but sure, if continuously fed to babies.

It must not be understood that formalin is a cure for foul brood. All that is claimed for it is that by its use foul-broody combs may be disinfected so that they may be safely used in a healthy colony. Even this is a very important matter, as thousands of dollars have probably been heretofore lost by the burning of such diseased combs.

The combs are submitted to the effect of the gas, and the most convenient way to use it is probably by means of formalin pastils vaporized in Schering's formalin lamp. The lamp costs $1.75, including 40 pastils, and pastils cost 30 cents for a box of 20.

For reliable disinfection of rooms in dwellings, one pastil is used for every 18 cubic feet. If it can be used at the same rate in disinfecting combs, a single pastil ought to be enough to disinfect 100 combs piled up in hive-bodies, costing only 1½ cents. Actual practice, however, will be necessary to determine the minutiæ, and to ascertain to a certainty that the disinfectant absolutely destroys all the spores.

The main facts here given have been obtained from Schering and Glatz, New York, the United States agents for Schering Chemical Works.

To Make a Smoker-Nozzle Stay On, it is advised in the Bee-Keepers' Review to "press the edges of the slippery top into the ground, and the grit in the soil will adhere to it so that it will stay on."

Association Notes

General Manager, N. E. France, of Grant Co., Wis., reported June 27 that he had extracted 26,175 pounds of clover honey to date, and was still getting from 1200 to 2000 pounds per day. He must certainly be a busy man, with his National Association and bee-inspecting work to attend to besides.

Convention Trip to California.—Prof. A. J. Cook, of Los Angeles Co., Calif., has this to say about it, in a letter dated June 22:

Of course, every one will wish to attend the National Convention in Los Angeles next August. I wish to give some suggestions which I am sure all will want to act upon.

Those who take the Santa Fe route should by all means go a day earlier and stop off at the Grand Canyon. A year ago I, with a party of 23 others, went specially to see this great wonder of the world. It cost myself, wife, and daughter, nearly $150, and yet we felt it all paid, and will never regret the trip. There were 26 in our party, and we had our own sleeper, which we kept on the ground during our two days' stay. Surely, no one can afford to come to Los Angeles and not stop off to see this great marvel of scenery, especially when the expense is only about $6.00 extra. I hope it will not be simply 18, but 18 times 18 who will avail themselves of this incomparable opportunity to have an outing that will never be regretted. The whole trip will be marvelously cheap considering what it means.

I would suggest that all who come return by way of the Denver & Rio Grande, where there will be another opportunity to feast upon scenery that rarely has anything to exceed it the world over. The Grand Canyon of Arkansas, through which this road runs, is certainly grand beyond compare.

I wish also to speak of two other routes home which will take longer time and will cost somewhat more money, but may well be considered by those who have the time to spare I refer to the Northern Pacific, with permission to stop off at the Yellowstone Park; and the Canadian Pacific, where the scenery for the entire route is the best of any of the railroad lines traversing the continent. I think that the finest place to visit, the world over, so far as I have experienced or studied, is the great Yellowstone Park. One needs a week or more in the Park to do it justice. I have visited Niagara, the Grand Canyon of the Colorado, Yosemite, and the Yellowstone Park, and for beauty, grandeur and variety I certainly place the Yellowstone at the head. The geysers in themselves are worth a visit to the Yellowstone, and to see them we must not delay, for the heated rocks, which cause them, are cooling off, and the time will soon be here when those wonderful phenomena can be witnessed no more.

The Grand Canyon of the Yellowstone, while not so grand as the Colorado Canyon, is in many ways even more attractive. It is wonderfully beautiful, and is not so large but that one can take it in, and it is really, at least at first, more impressive and inspiring than even the grander canyon of the Colorado. The numerous cascades and waterfalls, and the marvelous hot springs, not to speak of the Obscidian Mountain, give a variety to the Yellowstone that places this at the very head of regions famous for scenic beauty.

I would suggest to all who can do so to come to Los Angeles via the Santa Fe; stop off for one day—two would be better—at the Grand Canyon of the Colorado, and then return via the Northern Pacific. getting a permit to stop off at least ten days at Livingston, which will give ample time and opportunity to traverse the most wonderful part, not only of our country, but certainly one of the most wonderful pieces of natural scenery to be seen in the world. True, it will cost something, but it is worth all and more than it costs. If one does ever seem near the very Creator of all things it is while standing on the brink of the Grand Canyon of the Yellowstone.

A. J. Cook.

Convention Proceedings

Chicago-Northwestern Convention.

Report of the Chicago-Northwestern Bee-Keepers' Convention, held in Chicago, Dec. 3 and 4, 1902.

BY OUR OWN SHORTHAND REPORTER.

(Continued from page 422.)

SECOND DAY—Afternoon Session.

Dr. Nussle, of Wisconsin, then read the following:

SOME APICULTURAL SUGGESTIONS.

One roaring-big colony with a young, prolific queen, and plenty of room, will store more surplus honey then ten small colonies.

Young queens do not swarm the first year, as a rule.

Here is an entrance-guard that I invented a few years ago; it is simple, very cheap, prevents cold winds entering the hive, makes the hive dark, which is a great advantage in preventing robbing, and keeps the guard-bees warmer, and is more effective.

Thick combs may be evened up by ironing with a warm sad-iron, which makes them much more acceptable to the bees. This iron must not be too hot, as it would melt the comb.

If you have a queen that seems to be unprolific, put her in another colony and she may prove to be a wonder in being prolific.

To introduce virgin queens to nuclei or swarms that have undesirable virgin queens, hunt up the undesirable queen, dispose of her, and liberate the other virgin queen in front of the hive. As a rule, she takes a flight, and her virgin majesty returns in short order without any trouble whatever.

I like introducing by the honey method, as it saves valuable time and bees by the thousand, if the queen can lay at libitum from the first hour.

Never put two dry combs together, but alternate. It is good to sun or warm them first.

It does a sluggish colony good to transfer them into a clean hive, disturbing the order of the combs.

If you can put a colony in an absolutely dark place you can keep the same for drones to fertilize a queen just as well as in a cellar. The same with nuclei and with virgin queens till 5 o'clock in the afternoon.

I like sunning combs as it makes them less brittle, more agreeable to the bees, and less agreeable to the bee-moth. I am not quite sure if it pays to keep 50 nuclei early in order to get young queens before swarming-time; it is lots of work, still I think it pays. Up to this time I am not through experimenting.

CHAFF OR AIR-SPACE HIVES.

Regarding chaff hives, let me say that by next spring I shall have no other. With our cool nights in Wisconsin they are practically a necessity, as their advantages are numerous. Mine will not be chaff hives. Mine will be air-space hives. It is a physical law that an absolute air-space is better than seven times the same thickness of the best wool material that could be obtained. Though an absolute air-space is not easily obtained.

I shall remodel all of my hives, making an air-space in the front and the back of one-half inch. The sides will have an air-space of 1¼ inches.

I shall remodel my hive-covers, having a 4-inch rim *a la* telescope cover, the inside of the rim being 21 inches square. This cover is less liable to warp, and will make another air-space above and around the top. Besides, the wind will have less effect, and they will be less liable to be disturbed by cattle and sheep. Those objects have been a bone of contention with me for the past two years, at the place where our apiary is situated. This cover is also very serviceable for feeding above the frames.

The advantages of these hives are:

1st. They are warmer in the spring and fall, also during our cool nights.

2d. They are cooler during the summer heat.

3d. They do away with the necessity of summer shading.

4th. They will admit a 20x20 super, which contains 16 Langstroth frames.

5th. They are quite a protection against robbing.

6th. You will not find them carrying out brood during cold, rainy spells or frosty nights, as you see them do in thin-walled hives.

7th. You will be blessed more with large swarms.

8th. The bees will not leave the super for either comb or extracted honey every cold night, as they do in the thin-walled hives with the ordinary flat cover.

Lastly. They are less easily handled by thieves.

The little expense, the bulkiness, and the extra weight, should not be taken into consideration for its adoption.

The advantages of this hive will pay in a few days for the expense of remodeling by the results obtained.

With reference to a bee-cellar above ground, I will say that such a repository can be made suitable and bee-proof, which is a necessity; also ventilation accommodation, so that it can be increased toward spring. The ventilator must be screened from below, and a trap-door must be replaced by a screen. Water must also be given in sponges at the entrance of each hive to supply the necessary moisture required for brood-rearing, which begins to take place in all the hives at that time in a dry repository like the one I have just mentioned, and also to prevent restlessness and over-heating.

The outer casing of this hive practically does not cost any more than an ordinary hive, and the inner one can be made of much cheaper lumber and still be first-class.

KEEPING BEES IN THE CITY AND MOVING THEM SHORT DISTANCES.

I kept bees for several years practically in the heart of the city, from 30 to 70 colonies in the rear of my residence, between it and the stable, where I kept eight horses, one cow, and four setters. The buildings are situated on a corner lot opposite two stores, and the next door is a butcher-shop which does a large business, as also did the stores.

One block and a half away is the largest church, which has the largest congregation of any church in the city. Opposite the church is a school-house with 600 pupils, one-half of them passing our residence four times a day. Some of my hives were within two feet of the sidewalk.

I had Carniolans and Italians. If I had a cross colony I would supersede the queen. All of the queens were clipped.

I had poplars all around the yard, and some fruit-trees in the yard. By the way, it is on account of the fruit-trees I got the bees. The boys, as vandals, wouldn't only take the fruit before it ripened, but would even break the trees.

I bought some cross bees in the valley 10 blocks away. I moved them in the middle of the summer. My residence being 80 feet higher, I think the difference in altitude in the short distance kept my field-bees from returning to nuclei that were placed where the hives were taken.

I placed a colony on four stilts under every fruit-tree in the yard in a very flimsy way, thinking the boys would disturb them when they came after the fruit, but they have never disturbed fruit or bees since, so the bees could not give them a reception.

How it came about that the bees did not disturb the neighbors, or the daily pedestrians, was by the bees taking an upward flight as they left the yard, the same as if they came out of a kettle, and the same in descending on their return to the yard.

I would advise any one in like circumstances to provide for water in the yard proper from the very first day, as that is the only thing bees carry from the immediate neighborhood. I have seen them on a water-barrel as much as a swarm at a time in the next lot, the river being three blocks away, and a large creek four blocks from the residence.

E. E. Nussle.

Dr. Nussle—I have an entrance-gate that is an improvement on the former gates, preventing the air from getting into the hive in cold weather. It was simply a strip of wood under the front of the hive, and another gouged out of a block of wood which would be put in front of that so that the bees would have to go through a kind of a tunnel into the hive. A friend of mine has used that extensively, and he says he has never had a case of robbing since. He has used it more extensively than I. There is one advantage in it. It is very cheap, and any person can make it easily himself. It prevents cold wind entering the hive.

Mr. Pettit—I would like to hear the dead-air space discussed a little, as to how we can get dead-air space for the double-walled hive. I realize that the dead-air space is the best conductor, but the question is to get it air-tight. Take a piece of wood that is placed in front and behind the hive. A casing is around the hive, and the side-boards are placed at it afterwards, so by accurate work you can make a very good hive. It is all in accuracy and right lumber. They were air-tight, I am positive, because you could pull them up and the air would return just the same as out of a barrel. They were air-tight.

Pres. York—Is there anything else to be said on the paper, or on the air-space mentioned? If not, we will have the report of the Committee on Resolutions. Secretary Moore will read the report.

RESOLUTIONS OF RESPECT ON THE DEATH OF DR. A. B. MASON.

Whereas, To our Heavenly Father, for reasons which we can not now understand, it has seemed best to call to a higher duty our faithful friend and fellow-worker, Dr. A. B. Mason; therefore, be it

Resolved, That we, the members of the Chicago-Northwestern Bee-Keepers' Association, do hereby make an expression of our most sincere sorrow and grief over the loss of one of our truest stand-bys and supports; and be it also

Resolved, That we extend to his wife and to the other members or his family, our most earnest and heartfelt sympathy in their loss, which is greater than ours.

Huber H. Root,
W. Z. Hutchinson, } *Com.*
F. Wilcox,

Mr. Hutchinson—There are so many things I suppose I might say that I hardly know where to commence. Dr. Mason was a jovial, genial, joking character. The first time I met him was at the State Fair, where he was to award the premiums and I was an exhibitor. He looked me over and says, "Are you Mr. Hutchinson?" "I am, sir." He says, "Well, I am sorry to meet you." And for some reason or other I got onto the trick of his nature, and I said, "You can't feel any worse about it than I do." That is a key to his joking nature. I have known him personally, and have been a close friend of his for 20 years, and I can say that there never was a man who was a truer friend to me than Dr. Mason. I think all who met him in the National conventions will say he was the life and soul of those meetings, and I think no man in our ranks will be more missed in these conventions than he will.

The resolution was adopted unanimously.

Emerson T. Abbott then addressed the convention on

BEE-KEEPERS AND PRINTERS' INK.

Mr. Moore asked me to select a subject. I was at a loss to know what to talk about. I said to myself, "A great many of these bee-keepers know more about bee-keeping than I do, and it would be folly for me to endeavor to tell them anything about how to manage their bees, so I will let the matter rest until I get there." I thought I would select a subject after I got here, and this one came to me: "Bee-Keepers and Printers' Ink."

You have probably seen on your fence, Sunny Jim, and I leave you to guess what fool raised him. That jingle was written by a woman. The woman has made a good competency out of it, and the company for whom she did the work have made a fortune, and Sunny Jim is found all over the world wherever people eat, and more people know about Sunny Jim and that jingle probably than they know about any other one food.

Now, then, this same printer's ink should be applied to bee-keeping and the work of bee-keepers. It has been my hobby that this principle of printers' ink should be applied to the National Association. You know people who publish papers all believe in advertising. That is, they believe in the other fellow advertising, and in other people paying the cash in advance. Every paper man here will tell you that is so. All of the Chicago daily papers, all of them believe in advertising, and they believe that it can be done perhaps better in their paper than in any other way. We will leave each individual to decide that for himself, as to where the advertising can be done to the best advantage, but we want to emphasize the fact that the advertising can be done to advantage.

Take the National Association for instance. There are over 300,000 bee-keepers in the United States, and I venture to say that there are not 25,000 bee-keepers of the United States, if we could assemble them all to-day, that could tell what the National Bee-Keepers' Association has ever done. There are about a thousand members in the Association, and there are at least 300 of them, I should say, who have never seen a copy of the Constitution of the Association to which they belong. Now, doesn't that surprise you? But that is so. I am not making rambling statements that are not borne out by the facts. Three or four gentlemen said in my presence here, "Can I get a copy of the Constitution of the National Association?" I do not know where you would get it. They ought to be accessible, and you ought to have had one very long since. They hadn't been printed. Never but once in years have we seen anything credible in the form of advertising given out to the world, and that was the report of the Buffalo convention, which was published by Mr. York, and I have been watching and waiting anxiously to know whether we were to have a report of the same kind of our Denver meeting. What it stands for, what it proposes to do, and there isn't in existence to-day a single pamphlet, a single leaflet, a single scrap of printed matter on which a member can see—which will tell the story—and read it when you have time. And yet, we wonder why there are not ten thousand instead of one thousand members. I wonder why we haven't done more than we have.

Do you know whose goods are on the shelves of the merchants down in Iowa? I will tell you whose goods are there. The goods of the people who had a nature aggressive enough to send a smart and energetic traveling man there to show the goods to the best advantage, and make those people down there feel that it was to their advantage to do business with that house, and no other. The goods that are prominent in the United States to-day have been made prominent by aggressive men and women, and by the expenditure of printers' ink broadcast everywhere until the babe begins to lisp, as it were, the moment it says papa and mamma, Mellin's Food it knows next. Why? Because Mellin has used printers' ink. Because Mellin has used the agencies that are necessary. Now, there is Mr. Jones living over in a county in Illinois. He is a member of the National Bee-Keepers' Association. Is there any reason why Mr. Jones should not be a walking advertisement for the National Bee-Keepers' Association? He ought to be, and, if necessary, if Mr. Jones can not afford voluntarily to do the work for nothing, then he should be paid. There is no reason why we should not send out solicitors to entreat men to become members of our Association, than there is for life insurance men not to send out solicitors to get men to take out life insurance in their company. There is no reason why we might not be 50,000 strong in a little while actually, but we will never be 50,000 strong until we use the agencies of the Twentieth Century to make ourselves strong, and these agencies must be used by us if we ever expect to succeed, and one of the strongest and best of these is *printers' ink*, properly applied and properly distributed, backed up by the energy and enthusiasm of live men and women.

Now, it seems to me, that it is worth our while to think about this just a little. Suppose I could just stir up enough enthusiasm in you people here to send you out as walking advertisements in the interests of the National Association, or in the interests of this Chicago meeting. Why do you have a better meeting here than they have in any other place in the United States, aside from the National? It comes pretty nearly holding its own by some meetings of the National. Why is it? Printers' ink! And I hope you will excuse me if I ask another question. Why, instead of 300 or 400 members in the National is it 1000 strong? Printers' ink distributed by George W. York and others has done the work. Those are the sober facts. Those are stern realities.

Now, if we were all to distribute it, we would do that much more. We must have something to distribute. It costs money to get out neat circulars; it costs money to do anything. It costs money to print a journal like Mr. Hutchinson's, with fine illustrations, printed on good paper, but it all tells in the end, it all counts for something, and if we want to be a force and a power in the world we must let the world know that we are abreast of the times, and not a hundred years behind the age. A little peanut stand uses more advertising than we do, and we have no right to compete with the peanut stand unless we use some of their methods. I believe in advertising, in pushing matters.

As to the way to do these things, as to the special thing to be accomplished first, as to whether we had better try to build up a honey exchange—that's a business proposition. Whatever line of work we select, it must be along the lines I suggest—advertising—letting the world know that you are trying to do that thing. Let me say another thing: Perhaps you never thought of it. It is just as much news to find that there are bee-supplies for sale in Chicago as to read that they held a meeting here and I made a speech. One thing is just as much news as the other. It is just as much news to know that there is a suit of clothes for sale at a certain store in Chicago as it is to know that a hotel burned up—deplorable!—and 21 people lost their lives. There are people wanting clothes, and needing supplies, and the thing that carries that news to them is just as much distributing information as one that carries gossip about Jennie Smith and her beau. We have said it is of value to advertise. That's part of the thing itself, and that's part of what we want to know. You might say that of the National Association. They are blowing their own horn. I notice that some blow their own horns a good deal in something that I was doing. We have the famous horn-blower with Sousa, you all heard him, he is a citizen of St. Joseph. How much do you suppose Mr. Sousa would pay Arthur Prior if he let somebody else blow the horn? He has a good horn, and he is a good blower, and he has a right to blow it. I believe in people who have a good horn blowing it. It will never be blowed on earth if you don't blow it. The other fellow will never blow it for you. He is busy looking after his own horn. That's all there is to it. We can't build up a National Association. We can't do anything that bee-keepers want to do unless we blow our own horns sufficiently that they may be heard, and that the people may know that we have this thing, and that the people who want that are just as anxious to secure that which you have for sale. You don't want to think that you bore a man because you tell him a large story about your bees, for he is as pleased to hear it as you are to tell it. He is interested in hearing you, and it may do him some good. I have lived in St. Joseph 20 years, and, believe me, there isn't a week but somebody comes in and buys honey. It is some I produce myself with my money. A woman gets some of that honey and she says, "Mr. Abbott, I never had anything like it, I want your honey all my life."

Dr. Miller—She never tried "York's Honey!" (Laughter.)

Mr. Abbott—And she says, "I never knew that there was any Abbott's honey before." Don't you see, if I had blowed my horn a little sooner what an amount of honey I might have sold; and when she found it she was so delighted that she was in the fourth heaven. "York's Honey"—they find it that way. The more they take the better we can treat our wives, the more money it brings to us. I have said enough; I have taken enough of your time. I thank you. EMERSON T. ABBOTT.

Pres. York—There are two little corrections I would like to make about the Constitution of the National Association. I think Mr. Abbott said not over 300.

Mr. Abbott—I was asking it.

Pres. York—The Constitution was mailed in the Buffalo report. You didn't think of that, perhaps.

Mr. Abbott—No, sir. Let me say another thing. That wasn't said by way of criticising anybody, because it wasn't anybody's duty to have that Constitution printed. All the Constitutions that have been printed—I think Mr. York put that in the Buffalo convention report without being told to do so by the National. I was chairman of the Board of Directors for a long time, and if they ever passed a vote directing Mr. Secor to print it, I didn't know it. Mr. York printed it of his own volition.

Pres. York—It seems to me that Mr. France ought to take part now, following Mr. Abbott, about building up the National Association in Wisconsin, and I think he can say something very interesting on increasing our own membership. We heard him on another subject, but he hasn't had a chance yet on this.

Mr. France—I fully agree with Mr. Abbott, that we haven't used very much printers' ink. We debated cheating the consumers in a box of comb honey—squeezing. We have been doing the same thing, cheating our National Association. We haven't given any encouragement to bee-keepers, and the other subject of the National Association forming a honey exchange, if you please, will all correct itself as soon as you have members enough in the National. The first and foremost thing we want is to get strong enough to do some good, and although we have set our mark at 1000 and reached it, it looks small that a thousand members are all that we have when there are over 700,000 bee-keepers in this land of ours. I was surprised over my own State what a few members were taking the bee-papers. Mr. Abbott said that we haven't encouraged others to become members. If it is advisable that we organize, and we know that it is—we have the National—and the thing to do is to get more members in it, even though we have to pay a man for soliciting members like the insurance companies do for life insurance. We haven't even asked members to come in, or allowed them anything for soliciting new members. At our Association I was the first to introduce this thing of joining in a body. Join the National in a body; the more we have the more we can work. I do hope that the day isn't far off when the numbers in the National will increase rapidly. Then, again, this subject of foul-brood legislation, so many of our States need it, and the National Association, if it has any strength, can be a great help. Local legislation could not have much effect when it was transferred over from another State. It had a name, was doing business, and they had respect before the legislature, and so is the National, and I think the day is coming when we will all of us get our neighbor bee-keepers to join the National Association.

Pres. York—We have with us the president of the National Association; perhaps he would tell us some of the plans of the Association as to using printers' ink.

Mr. Hutchinson—I indorse all that Mr. Abbott has said. I believe in advertising my business in other papers. I don't know that there is anything to say in regard to the future of the Association. Mr. Moore had an excellent paper on that subject. We should go ahead and work, and advertise, and get members, and, possibly, as Mr. France says, if we get members enough this matter of organization will settle itself; but I don't know about that. I am sure we certainly need the members.

Pres. York—I believe the Board of Directors decided not to print the annual report this year, thinking they could use the money to better advantage in some other way. Of course, that is their own affair; it wasn't mine at all. I took the report, and we have the report in the American Bee Journal, anyway, whether it is in pamphlet form or not.

(Continued next week.)

Contributed Articles

Uniting Weak Colonies in Spring—Formalin.

BY J. A. GREEN.

MR. HASTY wishes me to explain (page 296) why I do not believe in uniting weak colonies in the spring, as stated in my article on page 197. I know very well that it is contrary to most of the teachings of the books, but experience has shown me that it is but very seldom anything is gained by uniting colonies early in the spring. Two weak colonies put together will usually, in a very short time, be no larger than either one would have been if they had been left alone. The reason of this is that a large proportion of each is old and nearly ready to die of old age. The excitement of uniting, and the sense of prosperity caused by the increased number of bees, induces the bees to fly more freely, and otherwise exert themselves unduly, so that not only these old veterans, but the young bees, are soon worn out and rapidly perish.

Now, if this is the case—and I can find plenty of company among practical apiarists in believing it to be true—it is still more certainly true when one of the colonies is queenless. The colony with a queen has been in a comparatively normal condition, which is not true of the queenless one in which a much larger proportion of the bees are old and nearly worn out.

Some may say that it would certainly have paid to have given a queen to the colony the bees of which lived so long. Perhaps it would. The unusual longevity of these bees might have enabled them to hold their own until they had reared successors to themselves. But this is by no means certain, and I feel morally certain that ordinarily if a queenless colony the size of this had been united early in the spring with an equally weak one having a queen, which would be the usual way of procedure, its bees, instead of living until September, would all have been dead before June, and perhaps much sooner.

Do not understand me as saying that it will never pay to unite a queenless colony with a weak one in the spring having a queen. If the colony has not been long queenless, or if it has still a large number of bees, it may work all right to give it a queen in any way.

What I want to make clear is, that it does not usually pay the man whose time is of much value to fuss with weak, queenless colonies early in the spring.

FORMALIN OR FORMALDEHYDE.

We read a great deal lately about this new specific against foul brood. As to whether we should call it formalin or formaldehyde, those who are informed on the latest chemical developments in the line of medicine tell me that the active principle is formaldehyde, and that formalin is a preparation of formaldehyde (patented, I believe), with the object of fixing it in solid form. They say that formaldehyde, in its ordinary liquid form—which I believe consists of the gas dissolved in water—is not only cheaper, but for many purposes, and probably for ours, is better.

In the enthusiasm over the results that seem to have been obtained, let it not be forgotten that all that can be claimed for it is that it obviates the necessity of destroying infected combs. As the apparatus needed for effective work appears to be somewhat expensive, and as we can recover very nearly all the value of old combs by melting them up into wax, it would appear that the margin of profit is not sufficient to warrant the use of the method unless there are a great many cases to be disposed of, or unless it is to be used as a preventive measure. For instance, if a man has a large number of extracting-combs from which he has just extracted the honey, he learns that some of the combs have contained infected honey. He does not know which they are, and, even if he did, the progress of extracting has doubtless spread the seeds of the disease through a large number of the combs. Without some efficient system of disinfection, it would pay him better to destroy the whole lot than to try to use them again.

Here is where the value of the fumigating method comes in. It might pay the man who lives where foul brood is prevalent to make a tight room large enough to hold all his surplus combs, and fumigate them all at one operation as a precautionary measure. But to go to almost as much expense and trouble to disinfect a single hive full of combs at a time, looks to me like being "penny wise and pound foolish."

Mesa Co., Colo.

Forced or Artificial Swarming.

BY M. D. ANDES.

I HAVE just read Mr. C. Davenport's article on page 374, on forced or artificial swarming. While I agree with him that locality has much to do with the method that would secure the best results, I believe Mr. Davenport is wrong on some points. Without going into details I will simply give my method, and the reader can see wherein we differ.

I do not profess to be a bee-master, and am a very poor writer, but I have had some experience outside of text-books that has been worth many dollars to me in surplus honey and time saved.

I keep from 35 to 40 colonies of bees in 10-frame dovetailed hives, with Danz. supers for comb honey.

My business requires my time at the office ten hours a day, so I have but little time to be with the bees. Ten years ago I commenced clipping the wings of my queens, and ever since bee-keeping has been a pleasure.

Now, when a swarm issues my wife or the hired girl cages the queen, and when the swarm returns (which it will be sure to do) the queen is run in with the bees, and the hive marked. The same evening, when I get home, I remove the colony to one side and put a new hive filled with drawn comb or full sheets of foundation on the old stand, shake and brush all the bees in front of this prepared hive on a sheet or table-cloth, and let them go in like a natural swarm.

With all my experience I have never had but one to swarm out treated in this way. By this method I do not disturb colonies that are not inclined to swarm, and they go on unmolested and store honey.

By the plan advocated by Mr. Davenport and others, one must be continually looking for queen-cells, thereby disturbing the bees, and, no doubt, at a loss in the surplus honey.

You may ask what I do with the brood. If I am treating a colony with a superior queen, I make nuclei and rear some fine queens, otherwise I destroy all queen-cells and place the brood on top of the weakest colony in the yard with a queen-excluder between; or, if this colony should have a poor queen or an old one, I save the best looking cell, kill the old queen, and leave out the excluder. This will usually give me a good, strong colony with a young queen, which will seldom swarm that season, but store a good crop for extracting in the fall. This method will keep down increase or make increase, whichever preferred.

This plan is entirely original with me, brought about by circumstances, and which has given me the best results. Colonies treated in this way, taken as a whole, always store more honey for me in the supers than those that did not swarm.

This is not practical for out-apiaries.

Sullivan Co., Tenn.

Queen-Rearing—Nucleus Queens—Other Topics Discussed.

BY HENRY ALLEY.

I DON'T think the subject of queen-rearing can ever be worn out. No end is in sight, so far as I can see.

I have been severely criticised in this Journal by several persons for statements I have made concerning queens reared in nuclei, and queens reared by a small number of bees. I have been criticised by people who merely guessed that I was wrong, not by those who had tried the experiment and noted the results. I stated in my articles that I could back up all that I claimed for nucleus-bred queens. I gave an account of one nucleus-bred queen that lived four years and two months, and could not have laid less than 100,000 eggs each year. Now, this queen was reared this way:

I fixed up a 3-frame nucleus merely for drones, as I had a few queens that I desired to have fertilized in another yard by a special strain of drones. One frame of worker-brood was put in and about three pints of bees. I did not open the hive for several weeks, and then only to see how many drones there might be left. I found the bees had provided themselves with a large, fine queen. She had such a promising appearance that I concluded to keep her in my own apiary. Now, that queen proved to be one of the finest queens I ever owned, or ever saw.

This brings the subject to another point: It has been claimed that queens reared from larvæ three days old are short-lived and worthless. Does the experiment given above confirm any such claim? Mr. Aaron Benedict, who reared and sold queens some 25 years ago, claimed that the best queens were reared from 3-days-old larvæ. I can not think so, yet I hardly know how to get over the fact that I did have one valuable queen reared from a three-day-old larvæ.

By the way, I am of the opinion that when a frame of brood is supplied queenless bees, an old larva is always selected by the bees from which to rear a queen.

Well, now I come down to nucleus-reared queens again: On the 19th of May (this year) I went into my apiary early in the morning (and the morning was a very warm one), and found no less than half a dozen colonies of bees clustered on the outside. All these hives had the winter-cases on, and several of them had a set of 24 sections on. I removed the out-cases to cool the bees as much as possible. I then looked for markings on the hives to see what kind of queens were in those colonies; I found marked on each of the hives "Nucleus queens," with the date of introduction. I was really surprised myself, as I had no idea I had introduced so many nucleus-reared queens.

Now, see here, my friends, I had nothing to do with rearing the above six queens. They were all reared in the small hives, such as I use to keep my queens until they become fertile. All these queens "came by chance," and they are good enough for me. Now, if bee-keepers who can do so will visit my yard, I will prove to them that nucleus-bred queens are as good as, if not superior to, natural-bred queens.

Unfortunately, we are in a bad fix for surplus honey this year. No rain has fallen here of any account since April. The grass and white clover are all dried up, and now, that the fruit-bloom is gone, there is nothing for bees to do but to eat what honey was stored from the fruit-blossoms. Many of my colonies were well under way in the sections, and some of the sections are full. All the brood-chambers are solid full of honey and no feeding will have to be done.

Last year bees did nothing in June. It was so cold and wet. Now it is dry and there is no honey. So you see we are in a "stew" all the time. Some will claim that it is owing to the breed of bees that they are gathering and storing no honey. Well, it may be so. I wish I could find a strain of bees that would store honey in winter and in summer when the flow is all used up. My past experience, however, makes me think that if I had queens of that sort to sell, somebody could be found that would cry them down. And this reminds me of what Mr. Doolittle said of my queens in a recent article from his pen. He showed that queens from my "hundred-dollar" queen did not compare in honey-gathering in any way with those he reared. Well, they say that comparisons are odious, but I must say one word here about Mr. Doolittle's queens:

In a letter dated at Riddle, Oregon, May 10, the writer says: "I have a yard of 75 colonies mostly of Doolittle's strain, and I *want to change them*." It is presumed these bees stored more honey than the writer could take care of, and so a change to something else is needed.

Three years ago I found a man in Brockton, Mass., who had 20 colonies of bees for sale, as he would be away from home all summer and could not care for them. I took a look at them, and could have bought them at my own price, but I refused, as there was not a decent colony of bees in the lot, and I am sorry to say that he had a number of Mr. Doolittle's queens in the lot. I remarked that I wanted bees for business that year, and I could not afford to keep bees 12 months to build up.

Now, I don't propose to say anything more on this point. I give the above merely to show that Mr. Doolittle rears no better queens than other people do. Neither do I want it understood that I think the *strain* of bees, nor the method of rearing the queens, had anything to do with the inferiority of the queens mentioned above.

Better queens than the above can be reared by any system, and at any time of the year. Mr. Doolittle, like myself, had been unfortunate in selecting a queen-mother. I have reared queens from a mother whose royal progeny did not all prove first-class. The queens were sent out and fault found with them. I replaced all such queens when notified that they were worthless, or in any way inferior.

I reared queens 25 years in the good old-fashioned way, and no fault was found with them; but when I took up rearing queens over an excluder, then complaints began to come in.

Bee-keepers make a great mistake in purchasing the *beautiful yellow-banded* bees. Insist upon a darker strain, say bees that occasionally show but one band. A queen that produces such worker-bees is superior to any brilliant yellow-banded strain. I never saw a queen direct from Italy that produced *all* three-banded bees.

Where are those fellows who used to advertise 5-banded bees? That strain proved to be worthless, and so did the clover-queens, long-tongue queens, etc. Go back, gentlemen, to the old-fashioned Italians, say such as were bred and sold 30 years ago, when about half of the young queens were striped and others very dark. We can rear such queens as those, and send out good ones—queens whose bees will roll in lots of honey, and winter well any winter. If you purchase queens to please the eye, you can't please the pocket-book at the same time. There's money in what some people call "hybrid bees." There is money in some of the beautiful yellow-banded bees, but 'tis a difficult job to rear those beautiful queens and give perfect satisfaction in all cases.

I am not advising any one to purchase hybrid bees. The bees above-described are not hybrids, by any means. I am advising you to order a darker strain of bees only. Try them and you will see an improvement in your apiary.

I have found in my experience that *pure* Italians bees do not rear nearly as strong, hardy queens as do black bees. I am using black bees in all cases in queen-rearing.

Mr. Doolittle says the cells built by my method are "frail." How does he know? To show that they are not, I have sent a batch of empty queen-cells to Editor York for his inspection. Say what you think of them.

In my statements concerning rearing queens above an excluder, I will say that fair queens can be so reared. But I know, and Mr. Doolittle will find it so sooner or later, that *better* queens can be reared by just as simple process. I'll soon have Mr. Doolittle saying so, as will all others who rear queens, if they will try the process I have given to the public.

Essex Co., Mass., June 11.

[We have seen queen-cells reared from cell-cups, and in comparison with the samples sent by Mr. Alley we should say there was little if any difference in those we have seen. —EDITOR.]

The Premiums offered this week are well worth working for. Look at them.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Getting Ready for Alfalfa.

Our bees are doing fine, considering the cold spring and queenless colonies. I am putting sections together and fixing supers for the alfalfa flow the first of July.

Mrs. G. W. Knowles.

Rio Blanco Co., Colo., June 24.

Does All the Work Herself.

I have been keeping bees since 1895. I now have 17 colonies. I lost five during the winter and spring. I do all the work with the bees myself, and send and get the hives in the flat and put them together myself.

I like "Our Bee-Keeping Sisters" department very much. I turn to it the first thing when I get my Bee Journal. I have no suggestions to make regarding it.

St. Joseph Co., Mich., May 30. Mrs. L. Mack.

Watering Bees at their Doorstep.

I see in last week's Journal, June 11, that E. E. Hasty requests me to report later on, as to the extent I succeeded in getting the bees to take the water I provide at their doorsteps.

It is three years, I believe, since I first gave them water at the hive-entrance. I don't wait for them to have any other place to go. It is when the air is chilled and they need water, and they come out and find it handy; they don't feel like going far if they can get it near by. They take it and go back. I have the entrance the full width of the front of the hive, so I put it at one side of the hive. The pieces go under the hive in front, as I said in my description, and they take the water all summer unless I would forget to fill it through the day. As I said, they were not large enough, and I have some made after the directions in the "A B C of Bee-Culture," a small board with grooves in it, and use a 2-quart fruit-can for the water. Where the hives are in pairs one will answer for two hives. I put it on something so that it will be about as high as the bottom-board, and not more than half a foot from the hive. I don't know as, my bees are any wiser than any others. I think they are pretty good-natured.

If this is not plain or satisfactory, E. E. Hasty will have to tell me where I have not made it plain.

Cumberland Co., N. J. Mrs. Sarah J. Griffith.

It is very true, as Mr. Hasty says, that bees will "wade right through water at their door, and go off to the old familiar watering-place." But he will notice that Mrs. Griffith does not wait for any other watering-place to become an "old familiar" one. Right in that is the secret of of her success. She trains them to right habits in their youth, "and when they are old they will not depart from them." If care is taken to get the bees accustomed to a certain watering-place early in the spring, much trouble at the watering-troughs of horses and cattle may be prevented.

A Bee-Keeping Sister on a Texas Ranch.

I bought 600 acres of land last June, and am now farming and running this big corn, cotton and truck farm myself. My home is in Chicago. I was a city-raised girl, and this is my first farming. They will eat tomatoes from five acres of my farm in Chicago. I began shipping June 1. I never saw one raised before, and raised the plants for the five acres in a hotbed planted Jan. 10; raised 25,000 plants myself with the aid of a hired man, who did the hard work at $10 per month. And I have the best and earliest five acres of tomatoes in Cherokee County. I expect to get $2000 for them, net. I could tell you more, but do not want to take you from your all-important subject—the bee.

I have always traveled, and while visiting my husband's brother in Indiana, last year, I became interested in the bee. He takes the Bee Journal, and has a large apiary. I thought my farm would be incomplete without the bee. Besides, this is a great fruit country, and no bees. I have 75 acres in peaches; Elberta comes in next spring. And I knew the bee could do no harm, if it would not be a benefit, to fertilize the blossoms. I started to look for some bees and could find nothing but old-fashioned boxes of little black insects. So I bought two colonies of them, sent for the American Bee Journal, and my brother-in-law sent me some patent hives, some frames with starters, and some frames with comb, a smoker, knife, and cages to introduce new queens, and a hook to handle the frames with. I then picked up the Bee Journal to find out who sold queens, and found an advertisement and sent for two tested queens. The breeder has sent only one to date, but I introduced the "lady," and to-day I was delighted to see my fine Italians strong, and working side by side with their black sisters, which are waiting to receive the high-bred mother, and there is no comparison. They are not doing anything when compared with the Italians. They (the blacks) were stronger than the colony where I put the new queen, and now the Italians have more brood, more honey, and more bees, than the blacks. I will tell how I did it all.

The first warm day I transferred the bees to new homes, and went to feeding them, for they were very weak, being robbed close and full of moth, and no honey in the old gums. I took an ax and broke open the boxes, shook the bees in front of the new hive, took out what brood there was, put a frame in to keep the queen down-stairs, and put brood and what bees were on it in the upper section, and went to feeding them to build them up before the Italians came. When the "new lady" came my greed for bees got me into trouble. I found them doing so well that I wanted more, so I got another hive and three frames of brood, and the bees that were on it, and armed with small scissors I caught the "colored lady" and clipped her wing, and placed her in front of the hive so she could run in. I then got out a frame where there was some honey and pinned to it the cage my brother-in-law sent me. I put the queen and her escort in it, and covered it all up. Three days later I looked in and found all the escort dead and the queen running around the cage. Then I turned her loose and went away, hoping she would be received well, and to-day I have a strong colony of fine bees. A man just came with the other queen, so I will introduce her to-morrow.

The bees then started to rob my nucleus, and the dead bees showed me the struggle they were having. I shut them up and fed them, but every time I opened up the hive the robbing began. I fed the other colonies outside, and the nucleus inside, to see if I could find out where the robbers came from. Do not laugh. I could not find out, so I shut up the nucleus and found a lot of bees around trying to get in. I got a paper of starch, this fine patent starch, and dusted it on them, and marked them that way. They shook their wings as best they could and left after awhile for the woods. Not a quarter of a mile from here we found the tree, and a man claimed it. I did not jump his claim. I was glad to get rid of it, so he cut it down and thinks he started a colony, and I hope he has, for there are few if any bees here.

So this is the way a future apiary was started in Cherokee Co., Tex. There is only one man who pretends to keep bees here in this part, and he has the old style. I will try to meet him and get him to take the American Bee Journal and show him the difference in bees. I like to read the Journal, and especially the "Sisters" corner, as I think the work suits ladies. My husband is a kind man, but he has a railroad contract in Louisiana, and will not settle on the farm until this fall, then I will have some more bees. I am not afraid of being stung, and have only been stung twice, and that was an accident. The bees got in my dress and I crowded them.

I love the bees. They work for us and board themselves for nothing, and I will always try to divide honey with them. If ever I think I have learned anything that will benefit a bee-keeping sister I will let her know through the Journal. Georgia Mayer.

Cherokee Co., Tex., May 25.

Well! I should think it was a pretty big undertaking for a city-raised girl to run a 600-acre farm, and there must be considerable pluck in your make-up. I am very anxious to learn how you succeed, how things foot up at the end of the year. Please don't forget to write us an account of your year's work. We may all want to move to Texas.

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

MATERIAL FOR HIVE-MAKING.

Yes, if the lumber was so costly it could not be used for hives we *could* use clay and straw. Are you "gittin' in a hurry" for the time to come? As a half-way house before going to clay, quite small saplings can be sawed into lath, and lath make pretty good hives. Poles large enough to saw into lath can be raised in less than a lifetime, while big logs can not—that is, not as a general proposition—cottonwood and some other trees can be made to furnish a big log in a moderate number of years. I find my full-grown oaks between 200 and 300 in age. With an intensive sort of forestry that could be shortened greatly. And an immense majority of the States haven't even a forestry officer yet. Page 327.

MAKING HONEY-BREAD.

If a *man* should undertake to make honey-bread, as per page 329, he would put the things named together and dump them into his flour directly, innocently expecting to knead up bread. I guess the ingredients named are to be fermented together first. If I'm wrong so much the better for the bread-makers.

THE WEATHER AND SWARMING.

Mr. Doolittle makes a worse report on bee-weather than I can. Bad here, but some of the bees don't give up the swarming idea yet. Page 332.

HONEY ON FRIED BACON.

Honey on fried bacon, eh? We can not put very much trust in the approval of soldiers in camp. Appetites too uproarous. But the combination is a striking one, not altogether incongruous, so if folks would only try it perhaps many would like it. Perhaps they won't try it. Some may say, "Why try to whiten the lily, or paint the rose?"

SPRING-FEEDING EXPERIENCES.

The spring-feeding experience of Edwin Bevins will make some of the let-alone folks smile. Began early with some—got to feeding them all—has to keep at it now, weather is so bad. My usual May and June tactics is not to feed a colony unless it shows the outward signs of starvation—bees in stupid lumps by the door, or climbing feebly up the front, and dead ones beginning to scatter away. And when such a colony is fed I don't want to get them in the habit of expecting feed. Lots of mistakes made both ways in feeding tactics. Many dollars worth of sugar and honey are fed when the value of it never comes back again—bees would have done better left to their own resources. On the other hand, for want of some feeding just at the right time, often the harvesting generation is only half strength, and can gather less than half a harvest. Which set of risks it is the best to run is a matter of location—and man. You see, in a good location some loss from too generous feeding can be borne; while in a poor location the bees can easily be allowed to eat up more than they are ever known to gather. Page 335.

QUEEN-EXCLUDERS UNDER SECTIONS.

I have been thinking all along that the "orthodox" way was not to use an excluder under sections. The consideration mentioned editorially, on page 339, is heavily the other way. Brood-combs will get black, and section cappings will partake more or less of near-by comb, if there is easy running back and forth. On the whole, wherever purchasers are extra-critical about whiteness the orthodoxy of excluders under sections must be conceded, I guess.

HONEY SHOWS AND PREMIUMS AT CONVENTIONS.

Combined convention and mutual admiration honey show! Premiums to be given if the condition of the treasury admits, otherwise not. The above is what the Wisconsins are about to experiment in. I think the rest of us should look on with decided interest to see how the thing works. Might knock out of itself what little life a feeble convention has. Might revive decidedly the waning interest of the old members, and bring in lots of new ones. Also might attract prospective customers to a valuable degree. Quite as legitimate to pay themselves premiums as to buy themselves buttons, one would say; although the consideration that every one can have a button is in the buttons favor. Permanent subdivision of the brethren into two classes, sharps who get the money and flats who pay it in—well, that's a very undesirable subdivision, and heedless management might easily bring it about. The brother who suspects he has been put in the flat division will soon make himself scarce—has already done so long since. Page 340.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Swarming—Bulk Honey—Building Worker-Combs.

1. I have a colony this spring with a last year's Italian queen in an 8-frame hive. They were strong, so I added eight empty combs below. Three weeks after that they swarmed without starting below at all. I examined the combs and found lots of worker-cells bulged out with drone-brood here and there all through the combs, but also considerable worker-brood. I hived them on five starters, and now (ten days after swarming), they have queen-cells nearly ready to seal again. What would I best do with them?

2. How is "bulk comb" honey managed to keep it from granulating, as it can not be heated and sealed?

3. I have had success getting worker-comb built from starters by putting all but four combs of brood above an excluder (queen below), and putting in a starter in the center of the brood. They build very fast, being so strong. Do you think it will always work? OHIO.

ANSWERS.—1. I suspect the queen was at fault, and you will probably do well to change her.

2. I don't know, and it seems strange that nothing has been said upon that point—at least I do not remember seeing anything about it. I should expect the liquid honey outside the comb to granulate, and then it would have to be eaten in that condition, unless the whole were melted and the wax removed. Perhaps Mr. Hyde will tell us about it.

3. No, you need hardly expect to have it always work, but there's no law against your continuing it so long as it does work.

◆

A Bee-Mix-Up that Mixed Up the Bee-Man.

I served three years as private of Company A, 36th Illinois Volunteer Infantry, and have been subject to the vicissitudes of a life in this world over 60 years; but during the three years' experience I have had with the "little busy bee" I have encountered more circumstances that I was unable to account for than during all my preceding life. Now here is what I met with in the last experience:

I had hive No. 1 filled with black bees with two dovetailed hive-bodies and super. Beside it was No. 2, Italian bees in one body with super and clipped queen. No. 2 sent out a swarm about 10:30 o'clock. I caught the queen, but before I could get a hive in place the bees nearly all returned. I moved the old body away about 20 feet, placed a new hive with foundation on the old bottom with the old super and the bees in it on the new hive, and liberated the queen in it, expecting the field-bees to return to it, which would make a strong colony.

About 2 o'clock I was informed there was a swarm of bees about a block away that I could have for 25 cents. I arranged a 10-frame hive about four feet from No. 1 and No. 2, and went and cut down the swarm and brought it home. They were evidently a stray swarm of black bees. I felt that I was on the road to success until about 5 p.m., when I discovered that Nos. 1 and 2 were in great excitement, and that the Italians from No. 2 were migrating to No. 1 by running down to the ground and across the 18-inch space and up to No. 1; and that there were black bees taking possession of No. 2, and my 25-cent swarm was not in the hive I put them in.

Now, there is much said about *bee*-paralysis and its treatment, but never have I seen a word about bee-keepers having it, but I went home that night *paralyzed.* I retained sense enough, though, to remove the upper body from No. 1 to a position on the ground in front and between the two hives, and the emigrants began to move into it. The next morning I moved it from the ground to a stand 22 feet away with a good supply of bees. But all three hives contain black and yellow bees in about equal proportions.

In the morning there was a cluster on the front of No. 1, and in it I found a black queen which I caged with a small number of bees, which appeared determined to hug her to death. I opened the cage to rescue her, and she darted out and over my *right* shoulder, and that is all I know of her. This caused me to have a spell of shaking *palsy* as well as *paralysis.* I have sufficiently recovered to conclude that the more I find out the less I know about bees. Now, what I wish to ask is:

1. What became of my 25-cent swarm?
2. Did I do the best thing in the matter?

GEORGIA.

ANSWERS.—1. If you're going to hold me responsible for the whereabouts of that swarm it might be better for me to pay the 25 cents and let it go, but in order to save the payment of so large a sum I'll make at least a guess in the case. Perhaps the safest guess is to say that it went into No. 2. There would be nothing very unusual in that, for it is a common thing for a swarm to enter wherever there is unusual excitement, and there seems to have been excitement at No. 2. Possibly you may say there was more excitement at No. 1, and ask why they did not enter No. 1 where there was as much or more excitement. I should have said they would, only for your testimony that black bees were taking possession of No. 2.

2. So far as I can see your course was all right except in the matter of the caged queen. It might have been better to have saved her in the cage till you were sure you didn't need her in either hive, and you might have taken more pains in caging her not to have allowed any workers in the cage. Likely that was not easy to do.

Moving Bees to an Out-Yard—Dividing Colonies.

1. Does moving bees have any effect on them just before a honey-flow? I have moved some of mine ten miles. They seem to be in good condition, but they are storing all their honey in the brood-chamber, and do not seem to go into the super. Some of them were moved with a super on top of the brood-chamber, as the brood-chamber would not hold the bees.

2. I would like to increase my bees. When would be a good time to divide them? I do not want to interfere with the honey crop. ALABAMA.

ANSWERS. 1. The moving would have no effect on them unless they were smothered or otherwise injured. Put a bait-section in the super, and see if that doesn't hurry them up.

2. It will probably interfere with the honey crop as little as any other way if you shake a swarm from each colony about the time of natural swarming, or a little before it. The shaken swarms would give you the crop, and the brood with a few bees would easily build up into a good colony.

Rearing Queens—Putting on Supers—Red Clover Bees—Preventing Sugar Syrup from Granulating—Feeding the Queen.

1. As I wish to rear a number of good queens next season, I want to know whether I should purchase one of those high-priced queens for a breeder, or can as good ones be reared from common stock?

2. When a super has been filled with honey should an empty one be placed under or over it?

3. Do you know whether any strain of bees can work on red clover? and, if so, who has them?

4. How can we prevent sugar syrup from becoming hard and crusty in the cells? I fed my bees last year, and the sugar syrup became candy, or, what is worse, it became hard like rock-candy.

5. Can a queen eat as other bees, or do the bees have to feed her? It is said that the bees feed the queen.

KENTUCKY.

ANSWERS.—1. Queens reared from the best of stock are none too good. It is possible, however, to get good stock at low prices by buying untested queens. A tested queen sold for a high price was at one time an untested queen, and if it had been sold at that time it would have been sold at the lower price of an untested queen. But in buying an untested queen you take the risk.

2. You will get your honey finished up sooner, and have it more fully sealed out to the wood if you put the empty super on top, and some say that there should never be more than two supers on at a time. I doubt, however, that you will get as much honey in this way. My own practice is to put the empty super under in all cases until it comes near the close of the harvest, when it is hard to decide whether another super should be given or not; in that case I put the empty super on top. Indeed, when a heavy flow is on and the bees have a good deal of room, I sometimes put an empty super on top for fear there may be a little crowding before I get around to them again.

3. Yes, there have been, one time and another, many bees that worked more or less on red clover; possibly some of your bees may do so. You will find advertisements of bees that are recommended for that purpose.

4. If you use an even teaspoonful of tartaric acid to every 20 pounds of sugar you will probably have no trouble. A better way, however, is to feed in such a way that the bees will have a chance to make it all right. Feed early, say in August or September, and give equal parts of sugar and water. Don't need to heat it—the bees will make it all right.

5. A queen can eat as other bees, as you can easily determine by caging one for a short time and then offering her a little honey. During the time of year when she is not laying she may help herself like other bees, but in the season of busy laying the bees feed her with food that is no longer undigested. If she were obliged to digest all the food she takes during heavy laying, I'm afraid the daily quota of eggs would decline very suddenly.

What is a Good Honey Crop?—Rearing Queens for Next Season.

1. What do you consider a good crop of honey for three colonies of bees? Do you think 150 pounds in six weeks a good deal?

2. Do you think it would be a good plan to rear queens this summer and give them a few bees in a very small hive, and next spring give them to a strong nucleus?

MISSISSIPPI.

ANSWERS.—1. That's a little like asking the size of a piece of coal. All pieces of coal are not of the same size. Crops of honey vary much. There are seasons of utter failure, and there are seasons when honey seems to come in a flood. The character of the bees, as well as the management, has also a bearing. If I could average, one year with another, 50 pounds in six weeks to each colony, I should call it a good deal.

2. Yes, if you can winter them safely.

Getting Rid of the Ant Nuisance.

1. I have been bothered with ants in my apiary. They will catch a bee when it falls to the ground and overpower and kill it, and also bother in the hives. Please tell me if there is any drug that will act on them as cobalt does on flies, and whether I could use it without danger of harming the bees. Coal-tar seems to do no good. CALIFORNIA.

ANSWER.—Find their nests, make a hole into it with a crowbar, pour bisulphide of carbon into it, and cover up the hole. But don't bring a light near, or you may get blown up. You may also poison them with poison such as Paris-green, strychnine, arsenic, etc. Mix the poison in honey or molasses, with enough flour or corn-meal mixed in so it will not run, and place it in convenient reach of the ants. Of course, it must be arranged so the bees cannot get it. It may be in plates covered with wire-cloth of such mesh as to keep the bees out but admit the ants, in which case it is not necessary to thicken with flour. It may be put on little boards. Take a board four to eight inches each way, and fasten on each corner a piece of section; put the thicken poison on the board, and then cover with a similar board. The thickness of the section is such that no bee can enter, but the ants can enter freely unless you have a giant breed of ants.

FROM MANY FIELDS

Summer Cold and Unfavorable.

The summer has been cold and unfavorable. Many days the bees could not work. They have hustled in the honey from white and alsike clover whenever the weather has been warm enough so that they could.

I have 25 colonies, some of them very strong, but I have not had a swarm yet. I moved my bees 30 miles last winter. I think it hurt them. Some of them were quite weak in the spring. C. H. Benson.

Barry Co., Mich., June 24.

How to Hold the Smoker.

You say it would be interesting to know how many disagree with Editor Root as to manner of holding smoker. It depends upon what you wish to do. If you want to blow smoke among the bees from the top of the hive, hold the smoker with the fingers next to the stove, if the large end of the smoker is up. If you work without a veil, and want to smoke the bees out of your nose, as you most likely will, then hold the smoker as "Ernest" directs. Dr. Miller thinks he may be pigeon-toed in the hands, but he is mistaken. Root is a man with defective hands.

Delos Wood.

Santa Barbara Co., Calif.

Common Motherwort.

You will find enclosed some kind of a honey-plant. Do you know the name of it? It blooms tolerably early, and the bees work on it a great deal. N. R. White.

Saline Co., Mo., June 24.

I send a branch of a flower on which bees work so lively. It has been in bloom every since May 20, and will, from all appearances, still bloom by July 15. Please let us know what its right name is. B. W. Hayck.

Adams Co., Ill., June 22.

Please tell me the botanical and common name of the enclosed plant. We have a few stalks of it growing in our garden, and although it is a common weed, we are letting it alone on account of the bees being so fond of its flowers. The flowers of this plant are fairly alive with bees all day long.

Kate V. Austin.

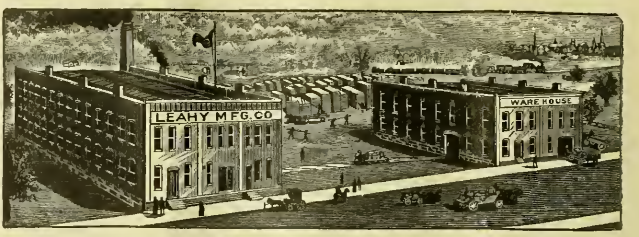
Wayne Co., Ind., June 24.

[The above inquiries are concerning the same flower—common motherwort, Leonurus cardiaca. It belongs to the mint family, and is in bloom several weeks during the summer. Prof. Cook, in his "Bee-Keepers' Guide," page 422 (17th edition), says of this flower, among others, that they "all furnish nice, white honey"—and "are througed with bees during the season of bloom."—C. L. Walton.]

A Discouraging Outlook.

I enjoy reading the reports all over the country, and as I have seen none from this vicinity of late I will report. The outlook is quite discouraging for a honey crop in southwestern Wisconsin this year. We have plenty of white clover, but bees are working on it but little. We have some alsike, and bees are storing from this when the weather will permit. To-day we haven't seen the sun. It rained most of the afternoon, a little in the forenoon, just enough to stop bees working. A good many came out, got wet, chilled, and will never return. The temperature is quite low—about 55 degrees. Strong colonies in double extracting hives, *i. e.*, two-story, are all capping just a little on the upper frames. There is nothing in the supers for comb to speak of, unless confined very closely below, and little then.

Bee-keepers report bees breeding up nicely and if we had basswood for them to go onto



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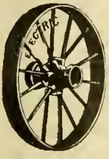

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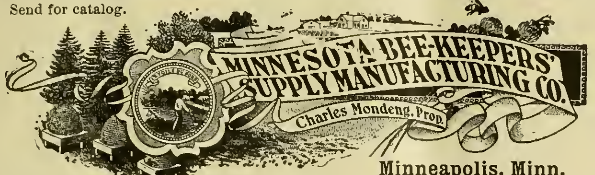
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about July 1, then we would be "in it," but there is no basswood to speak of. Bee-men report all over this southwestern part of the State about a quarter the usual amount of basswood budded. Around my apiary there is none. I bought buckwheat seed and sent out near town so as to have fall feed, and to-day I learned several farmers were going to sow buckwheat. For the past six years there hasn't been any of it raised around here.

Bees are swarming but little yet. It is getting quite dry. We need a good, soaking rain, *some*. We had too much in May.

Grant Co., Wis., June 19. L. G. BLAIR.

Very Bad Spring for Bees.

This is a very bad spring for bees here. It rained every day for three weeks. I have 40 colonies, and have had but one swarm this spring. Bees are doing nothing in Hunterdon county, so far. We are looking for better weather. A. DALRYMPLE.

Hunterdon Co., N. J., June 24.

What Ails the Bees?

I want to write to you on two or three subjects. Last summer I had 70 colonies of bees, and this spring I had 25. Some did not have more than one pint of bees. Last summer it looked as if some of the brood starved after it had been sealed over. After the bees had died I found nearly all more or less that way. This spring I still thought the brood had starved (chilled) in nearly all hives. But now there are honey and bees enough so that the brood would neither chill nor starve, and still I find lots of brood in the weak ones, and some in the stronger ones, in the same condition—some will be sealed over and dead, apparently. Sometimes as much as one-half the brood, and then their eggs and brood not sealed over. There is no odor or bad smell that I can tell. Some of the dead brood turns brown and dries up in the cell. Now, from this, can any one tell what is the trouble? Give me a minute description of foul brood, black brood, and pickled brood, or diseases that fits the symptoms.

R. R. STOKESBERRY.

Vermilion Co., Ind., June 24.

Dwarf Essex Rape for Bees.

Bees are doing well here now, as there is one of the best crops of white clover this country ever produced.

I think I have made a little discovery in regard to Dwarf Essex rape for bee-pasture. Last year, after I had dug the early potatoes, I sowed the ground to rape for pig-pasture. One point of about 3x4 rods square was not fenced in. The most of it wintered and began to blossom soon after fruit-bloom, and the bees have been working on it ever since—about five weeks now—and they still continue to work on the last flowers, as it is about gone. They have worked on it during the last two weeks with plenty of white clover all around it. I think they work it mostly for honey, as I never noticed them loading with pollen. I think of sowing two or three acres in August or the fore part of September for a bee-pasture next spring. It will be out of the way in time to sow a crop of buckwheat.

If any one has had any experience with rape for bee-pasture, and can give any information in regard to its management, I would like to hear from him through the American Bee Journal. P. B. RAMER.

Fillmore Co., Minn., June 26.

No Swarm in Eight Years.

So much has been said and written about the desirability of non-swarming bees that I thought perhaps a few words from me would be acceptable, as I have had some experience in that line, and I am convinced that I have got a non-swarming variety of bees. Why do I think so? Because they answer the description as given by nearly all the writers on the subject, viz., they do not swarm; but they do give me surplus honey every year. I can't take credit for better management, for I manage just as all prominent writers say we should manage. There is plenty of room in the brood-chamber for the queen to lay, plenty of ventilation when weather is warm, and I extract whenever the bees begin to seal the honey in the super, so the management is nothing unusual. Yet I have not had a swarm issue in eight years.

I have five colonies back of my home, and my lot is 30 feet wide, with neighbors on both sides. So a swarm could not very well get out without being seen, and my queens' wings are clipped; that is, I clip one wing quite short.

The orginal queen was a gold-dust Italian, and the ones I now have are of her stock. I am not selling queens, but I do think I have a stock that won't swarm if given fairly good management. I have kept bees off and on for 16 years, but never very many colonies at a time. I use 8-frame dovetailed hives, and run for extracted honey altogether.

D. A. Harrah.

Rock Island Co., Ill., June 24.

Too Cold for Bees.

Bees are doing fairly well. It has been too cold. We had two frosts this month. Our bees are too far from good clover fields, which are abundant two to four miles away.

Rock Co., Wis. Theo. S. Hurley.

Too Much Cold Weather.

The honey crop will be fair, but not nearly so big as expected. We have had too much cold weather here. Besides, bees were weak on account of the drouth last year.

Jas. Hornback.

Riverside Co., Calif., June 17.

Self-Spacing Brood-Frames.

As there has been so much said about the Hoffman and *other* self-spaced (or fool-proof) frames, I will tell why they are not wanted. In Cuba, for instance, we have to extract from the brood-chamber regularly, so that the same frame is part of the time in the brood-chamber and part of the time in the super. Now, here is the point: Seven frames are used in a 10-frame super. Now, when you jerk the cover off from one of these supers all that you can see is honey. And when you uncap, one side or edge of the knife is dull for chopping the wax and honey off the top-bar. Now, just tell me where your staples would be?

Here in Illinois I am using six frames in an 8-frame super, and I want a frame that can be used both above and below. So for extracted honey you or anybody elso want a self-spaced frame.

Comb honey is a little different thing. I like a self-spaced frame for that myself. I have a few staple-spaced frames and about 50 hives with Hoffman frames, and every time I go over them a few of them get their legs broken. I was with Moe in Cuba last winter, and will probably return to the Island.

Leslie Burr.

Grundy Co., Ill., June 18.

Sainfoin or Esparcette.

Bees are doing well here considering the dry weather that we have had this spring. We expect a great quantity of bloom from white sweet clover, but the cattle are beginning to learn to eat it too freely this year. I planted some yellow sweet clover seed in a field where the cattle could get it to eat. Say! they put that yellow clover out of sight as readily as a small boy would a candy-stick.

But I have, I believe, struck luck in another direction. Some years ago Mr. Dadant gave a write-up of his travels in some of the old European countries, and mentioned sainfoin, or esparcette, clover as a good honey-plant. Well, I have been scheming around ever since to get hold of it. My plants are now two years old, and the way those little bees hustle around on that sainfoin would make any one's heart glad. My clover has been in bloom three weeks now, and although we have had very little rain the bees have been working hard on my little p'ot of it every day. It is a good fodder-plant, making good

Italian Queens, Bees and Nuclei.

We have a strain of bees bred specially for honey-gathering and longevity, at the following prices:

One Untested Queen.....$ .60
One Tested Queen .... .80
One Select Tested Queen. 1.00
One Breeder Queen 1.50
One-Comb Nucleus (no Queen)................ 1.00

These prices are for the remainder of the season.

Queens sent by return mail. Safe arrival guaranteed. For price on Doz. lots send for Catalog. **J. L. STRONG,**
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Italian Queens, by Mail.
Golden and Honey Queens.

July and August.	1	6	12
Honey Queens (Untested)..	$ .75	$ 4.00	$ 7.00
" " (Tested)....	1.25	7.00	13.00
Golden " (Untested)..	.75	4.00	7.00
" " (Tested)....	1.25	7.00	13 00
2-frame Nucleus (no queen)	2.00	11.00	21.00

Breeders, $3.00 each, after June 1.

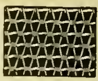
Add price of any Queen wanted with Nucleus.
Our bees are shipped in light shipping-cases. Purchaser pays express on Nuclei.
Safe arrival guaranteed of all stock sent out.

Batavia, Ill., Aug. 21, 1901.
Dear Sir:—I thought I would let you know as to results of the nucleus sent me. They were placed in 10-frame hives and now they are in fine condition. From one I removed 24 pounds of honey and had to give 6 of them more room, as they were hanging out. They have more than reached my expectations.
Yours respectfully, E. K. Meredith.

Davenport, Iowa, Dec. 31, 1901.
Your queens are fully up to standard. The honey queen that you sent my brother takes the lead. She had a rousing colony when put up for winter. The goldens can be handled without smoke or veil. Very truly yours,
John Thoeming.

Notice. — No tested stock sent out before May 15. Send money by P. O. Money Order or Express Order. **D. J. BLOCHER,**
17Atf PEARL CITY, ILL.

Please mention Bee Journal when writing.



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Special low price on queens in lots of 25 to 100.

All queens are mailed promptly, as we keep 300 to 500 on hand ready to mail.

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The leading Horticultural and Agricultural paper of the Pacific Coast. Published weekly, handsomely illustrated, $2.00 per annum. Sample copy free.
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HIGH-CLASS QUEENS. — Buckeye Strain Red Clover Queens, they roll in the honey while the ordinary starve.

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We guarantee safe arrival by return mail.

APRIL, MAY, JUNE.

Untested ....$1.00 each; 6 for $ 5.00
Select Untested... 1.25 each; 6 for 6.00
Tested............. 2.00 each; 6 for 10.00
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Best money can buy...........$5.00 each.
2-frame Nuclei with Select Untested Queen $2.75

Send for Catalog and see SPECIAL INDUCEMENTS.

THE FRED W. MUTH CO. Front & Walnut Sts., CINCINNATI, OHIO.

Please mention Bee Journal when writing.

hay. It comes up for several years, I believe. It will pay to raise it for both hay and honey.

W. D. Harris.

Ontario, Canada, June 22.

Beedom Boiled Down

Putting Name of Producer On Honey-Packages.

W. W. McNeal, who has figured both as a producer and a dealer, says in the American Bee-Keeper:

The producer who contends that he is robbed of his rights when he is denied the privilege of ornamenting small honey packages with his name and address, when such are not to be delivered to the consumer by himself, is certainly laboring under a mistaken idea of what constitutes justice in the art of trade. He may feel a pardonable pride in the excellence of his goods, but he should not insist on having all the glory and profits, too, when he reaps the benefits of a wholesale disposal of his crop to the dealer.

The dealer who caters to the retail trade has much to contend with and he should be given a clear title to his purchase, unencumbered by the name and address of the producer. When he has succeeded in creating a demand for honey in this more expensive way, his name is the one for lovers of honey to become familiar with. When he has paid for any given number of pounds of honey he should be accorded the right of his own name on his (then) own goods if he chooses to exercise that right just as truly as though he were to purchase any other of the farm products. This is only playing fair—only giving him a chance, and in no wise can it be said to be a slap at industry and a defeat of those principles of justice and right which inspire to a betterment of present conditions.

Candy for Queen-Cages.

I have now been exporting queens to all parts of Australia for nearly 20 years, and I have found no sugar equal to "icing sugar" for making candy for provisioning queen-cages. To make I place the icing sugar on a large plate, and on top of it I pour a little honey of the best quality. This is then worked vigorously for almost half an hour, rolling it occasionally in the sugar with a glass-bottle roller, and then working it again in the hands until it becomes soft. To test its consistency I work it in the hands awhile without adding sugar, and if it does not stick it is right, and will successfully stand any weather, wet, dry, or hot.—H. L. Jones, in the Australian Bee-Keeper.

Confining Bees for Shipment.

In the preparation of an apiary for a long move, there are innumerable details which develop to keep the manager thinking and conniving. In order to avoid a loss of field-bees, it is necessary that they be confined after all have returned for the night. Considerable time and labor are required to affix proper entrance-screens; and time, under such circumstances, is usually at a premium. As a possible helpful suggestion to those who have such work to do, we shall endeavor to explain the ingenious plan adopted by our old friend Pat, when preparing for the Cuban trip:

Several days previous to the date upon which it was desired to make the start, Pat bestirred himself in quest of about a bushel of old corks of uniform size. Having ascertained the exact size of the stoppers at his command, he proceeded to bore a hole into which they would snugly fit, in the front end of each hive, about centrally located. Wide entrance-screens were now adjusted to prevent the bees from using the ordinary entrance. These screens were supported by frames made of lath, and permitted the bees to come out and move about upon the front of the hive across its full width and upward about four inches. The bees soon became accustomed to the 'new opening, and through it work proceeded as formerly, though the old entrance was stopped by the screen device.

On the evening of the departure, with car upon the side-track, and drays in waiting, Pat might have been seen peering into space and anxiously scanning the western horizon, while he held in his hand a commodious basket of corks. The exact moment for operation must have been very definitely decided by visible conditions, for when it arrived, a handful of corks was grabbed, and beginning at one corner of the apiary, with but a single step from hive to hive, they were inserted with mechanical regularity, and the whole 200 or more colonies were ready for loading in less time than it will take the reader to hear how he did it.—American Bee-Keeper.

Close Saturdays at 1 p.m.—Our customers and friends will kindly remember that beginning with July 1, for three months we will close our office and bee-supply store at 1 p.m. on Saturdays. This is our usual custom. Nearly all other firms here begin the Saturday afternoon closing with May 1st, but we keep open two months later on account of the local bee-keepers who find it more convenient to call Saturday afternoons for bee-supplies.

Prize-Winning Stock

Daughters of Moore's famous long-tongued red clover Italian Queen, which won the $25.00 prize offered by The A. I. Root Co. for the longest-tongued bees; and also daughters of other famous long-tongued red-clover breeders whose bees "just roll in the honey," as Mr. Henry Schmidt, of Hutto, Tex., puts it, now ready to go by return mail. Untested Queens, 75c each; six, $4.00; dozen, $7.50. Selected Untested, $1.00 each; six, $5.00; dozen, $9.00. Safe arrival and satisfaction guaranteed. Circular free.

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Daughters of Select Imported Italian, Select long-tongued (Moore's), and Select, Straight 5-band Queens. Bred 3¼ miles apart, and mated to select drones. No bees owned within 2½ miles; none impure within 3, and but few within 5 miles. No disease. 30 years' experience. WARRANTED QUEENS, 75 cents each; TESTED, $1.50 each. Discount on large orders.

Contracts with dealers a specialty. Discount after July 1st

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HONEY AND BEESWAX

MARKET QUOTATIONS

Chicago, June 27.—The market is very quiet, a little extracted sells for immediate use at prices ranging from 5½@6½c. Comb is lifeless with quite a quantity on the market. Beeswax, 30@32c. R. A. Burnett & Co.

Kansas City, June 30—No comb honey in this market. New white comb would sell for $3 50 to $3 75 for 24-section cases; amber, $3.25 to $3.50. There is considerable extracted honey on the market with scarcely any demand. Price nominal at 5½@6½c per pound. Beeswax in demand at 25@30c. C. C. Clemons & Co.

Albany, N. Y., June 20.—Honey market quiet here; prices nominal and light receipts. We quote light comb, 15@16c; mixed, 14@15c, Extracted, white, 6½@7½c; amber, 6@6½c; dark 5½@6c. Beeswax, 31@32c. H. R. Wright.

Cincinnati, June 1.—Very little change in market from last report. We quote amber extracted grades at 5½@6½c in barrels; white clover, 8@9c; supply equal to demand. Comb honey, 15@16c for fancy. Beeswax, 30c.

The Fred W. Muth Co

New York, May 21.—Comb honey trade exceptionally quiet, very little doing. Fancy stock not plentiful and is sold at 14c. A large supply of other grades on hand, which we are quoting at from 11@13c, according to quality, and in large lots make concessions from these prices. Extracted, unusually quiet, and prices show a downward tendency all along the line. Beeswax, firm at from 30@31c.

Hildreth & Segelken.

Cincinnati, June 27.—The market for honey continues very uncertain, and there are no settled prices, if anything the price has a tendency downward. We quote same as follows: Fancy water-white brings 15@16c. Extracted, amber, in barrels, 5¼@5½c; in cans, 6@6½c; white clover, 8@8½c. Beeswax, 30c.

C. H. W. Weber.

WANTED WHITE CLOVER EXTRACTED HONEY!
Send sample and best price delivered here; also Fancy Comb wanted in no-drip cases.
THE FRED W. MUTH CO.
32Atf Front and Walnut, Cincinnati, Ohio.

WANTED!
California Comb Honey in car-lots. It will pay you to correspond with us.
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WANTED—Extracted Honey.
Mail sample and state lowest price delivered Cincinnati. Will buy FANCY WHITE COMB HONEY, any quantity, but must be put up in no-drip shipping-cases.
C. H. W. WEBER,
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That covers the whole Apicultural Field more completely than any other published, send $1.20 to
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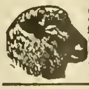

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BEESWAX WANTED at all times.

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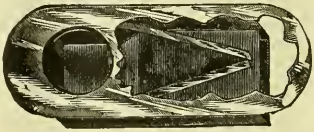
PRICE: 20c each; dozen, $2.25; postpaid. With board, 35c each; $3.20 per 10; by express or freight.



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over the doors and windows in the extracting-house, or any place you wish to clear of bees. The most persistent robber cannot return. Some bee-keepers make a practice of taking off the filled supers and stacking seven or eight in a pile. The Porter Honey-house mounted on a board makes the best kind of escape. Don't wait till to-morrow before you get a supply. You can't afford to be without them longer.

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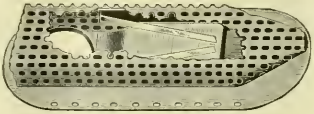

Nat'l Bee-Keepers' Convention at Los Angeles, Aug. 18-20

AMERICAN BEE JOURNAL

43d Year. CHICAGO, ILL., JULY 16, 1903. No. 29.

WEEKLY

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THE AMERICAN BEE JOURNAL

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GEORGE W. YORK.

DEPT. EDITORS,
DR. C. C. MILLER, E. E. HASTY, EMMA M. WILSON

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2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

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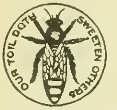
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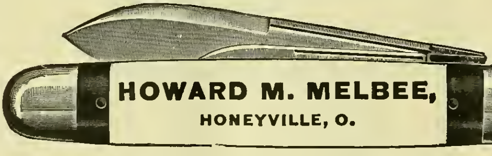

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AMERICAN BEE JOURNAL
ESTABLISHT IN 1861
THE OLDEST BEE-PAPER IN AMERICA

43d YEAR. CHICAGO, ILL., JULY 16, 1903. No. 29.

Editorial Comments

The Growth of Clover in northern Illinois this year is unprecedented. A correspondent sends a head of ordinary white clover measuring a full inch across, with a stem more than 15 inches in length.

The Economy of Using Foundation, says Adrian Getaz in Gleanings in Bee-Culture, is not so much in the saving of honey that would be used in secreting the wax as in the greater amount of standing room for the laborers. If a full sheet of foundation is given, work may be commenced at once over its entire surface, while if no foundation, or only a small starter be given, no work can be done on any part of the comb till all above is built down.

An Improvement in Smokers that will be appreciated by many is worth mentioning. It is a common thing for the nozzle of a smoker that has acquired some age to get to be something of a nuisance by becoming difficult to fasten on, and easy to tumble off. The A. I. Root Co. are now making the nozzle, lid, or cover, to the smoker something like the cover to the ordinary baking-powder can, the cover being hinged to the bellows-board.

This makes a much more secure covering than the ordinary flaring arrangement. Of course, however, it must be kept cleaned or there will be trouble about the fit; but no amount of cleaning will make the old flaring kind work to entire satisfaction.

Young Queens and Swarming.—It is agreed on all hands that a colony with an old queen is more likely to swarm than one with a young queen, other things being equal. Whether the mere presence of a young queen is sufficient entirely to prevent swarming is quite another question, and upon this point opinions are divided. Editor Hutchinson says:

> "Year after year have I proved the truthfuless of the theory that the giving of a young queen before the swarming fever has developed, will prevent swarming."

On the other hand, Dr. Miller says that one year about the beginning of the honey harvest, and before the development of the swarming fever, he supplied all the colonies of one apiary with young queens, but they swarmed. Some of the highest European authorities hold that a colony will not swarm if it contains a young queen reared in the colony itself. This, probably, may be generally relied on, but some have reported exceptions. It would be interesting if one could know what conditions or circumstances make such differences in results.

Forming Nuclei.—H. L. Jones, the bright Australian queen-breeder, gives in the Australasian Bee-Keeper the following plan:

> On the ninth day after preparing a batch of queen-cells I go to the colony I wish to divide and remove the queen along with a frame of bees and brood and make a nucleus of this. On the following day I go to my batch of ripe queen-cells and place each one in a West queen-cell protector, and then each cell-protector in a West spiral cage, first securely closing the opening at the bottom of the spiral cage with wax. Then I place say four of these in the queenless colony, one cage to each frame of brood. The next day there will be four young queens in the hive, and all I have to do is to take away each frame of bees, brood, and queen, and a frame of honey placed in a nucleus, release queen, and practically every bee will stay there as contentedly as if they had swarmed there. I have made thousands of nuclei in this manner, and it is far more satisfactory to me than any other I have ever tried.

The essential feature in the case seems to be that the bees, on being moved to a new location, are accompanied by their queen. Probably the same result would be obtained if the maturing cell were caged in any kind of a wire-cloth cage.

Abdomenless Bees is the strange heading of an editorial in Gleanings in Bee-Culture. At first thought it would hardly seem possible that by its own act a bee would actually tear itself apart, but there seems no chance for mistake. The editor says:

> About the first of May, when spraying was being carried on by some of our neighbors, I noticed hundreds and hundreds of our bees, which had lost their abdomens, dropping down on the sidewalks, or on bare spots of ground. In fact, such bees were scattered all over everywhere, but they showed up more plainly, of course, on the sidewalks. These wriggling creatures, without their hinder parts, crawling around, keeling over and over, were, of course, very much out of balance. They appeared greatly distressed. They would rush around in circles, or tug with their hind legs at their abdomens as if there were some pain or distress in that portion of their bodies. I was nonplused.
>
> I watched the bees flying overhead, and noticed the fact that they were coming from the fruit-bloom, and I began to surmise that the trees off in that direction had been sprayed with poisonous mixtures, and that the trunkless victims on the sidewalk had come from them direct. After watching in the air for some time I saw a bee suddenly drop down, without its abdomen, and strike the sidewalk with a bound and a whirl. I looked up again, and finally saw a bee flying toward me suddenly drop, whirling over and over, and land on its back, without its abdomen. That this bee had been flying was very plain. When I first saw it it was rolling over and over in the air. From some cause or other it had lost its abdomen while on the wing; and at the precise moment of losing it, it went keeling heels over head until it landed at my feet.
>
> I then called the attention of our apiarist to the matter, and we both got down on our hands and knees and watched. Finally, I saw a bee tug away at its hind quarters until it actually, by the power of its hind legs, tore its abdomen asunder at one of the segments or rings. But in this case the separation took place, not at the waist, but midway along the abdomen. A further search showed that other bees were tugging away at their bodies, and had torn them loose in the manner described.
>
> My theory was, the bees that had just come from the field were suffering from poison, and that, while on the wing, they would tug away at their bodies with their legs, and finally effect the separation of the parts. We picked up a number of the victims with and without the abdomen, and all of them apparently suffering. These were sent to Prof. Frank Benton, Apricultural Expert at the United States Department of Agriculture, Washington.

Dr. Wiley, the government chemist, made an examination to see whether any trace of arsenic was present, as the presence of arsenic would confirm the suspicion that the bees were poisoned by Paris-green used in spraying fruit-trees when in bloom. Dr. Wiley reported that arsenic was not present, but small amounts of copper were. This points pretty plainly toward poisoning by Bordeaux mixture, the principal ingredient of which is copper sulphate, or blue vitriol. Bordeaux mixture is used very commonly in spraying, perhaps more generally than Paris-green.

The dying in such torture must have been a pitiable sight for one who loves the busy little creatures, and makes one feel that there should be a more determined effort than ever to have laws made in every State to prevent spraying fruit-trees when in bloom.

Association Notes

Mr. D. H. Welch, of Stafford Co., Kans., writes as follows in reference to attending the convention at Los Angeles:

> Could one get a stop-over enroute to San Francisco and attend the convention and still not miss the G. A. R. meeting at the latter place? If so, could I take the same train you come on that stops one day at the Grand Canyon? What hour would it pass through our town? Would I need a special ticket to get these privileges?
>
> D. H. Welch.

We will have to refer Mr. Welch to his station agent, who likely can answer his questions. As we understand it, the train on the Santa Fe that will have the special car goes first to Los Angeles. The G. A. R. Encampment meets a little before the bee-keepers' convention, we believe, so that it would be necessary to go to San Francisco first.

We will not attempt to say anything further in answer to Mr. Welch's questions, as we really are not able to answer them. His station agent will likely be able to furnish him all the information needed.

A Car-Load of Bee-Keepers for the Los Angeles convention would be a great thing. We suppose all have read what Prof. Cook said, in last week's Bee Journal, about the Grand Canyon and other scenes along the route to be taken to and from the convention. We are certain that the required number, which is only 18 persons, will easily be secured to make the trip together. Pres. Hutchinson, in referring to "the pleasures of a trip across the continent, and a visit to the Grand Canyon, of a company of bee-keepers who are sufficiently interested to cross the continent to attend a bee-convention," has this to say also:

> "Four days and nights in such company will beat any convention all hollow. The fellow that does not go will regret it only once—but that will be for a *lifetime*."

Those who have already expressed themselves as expecting to go in the company referred to are the following: W. Z. Hutchinson, one or more of the Root Co., Dr. C. C. Miller, and the writer and his wife. So it will be seen that a good start has been made already. There are others who are thinking of going, and, no doubt, will decide to join the party. If all such will kindly write us we will be pleased to mention their names in this department. No doubt there will be several from New York State who will meet in Chicago and go in the car mentioned. It will be a great trip, and should be taken by every bee-keeper who possibly can get away long enough to go to Los Angeles and back.

Miscellaneous Items

Father Langstroth has credit in Gleanings in Bee-Culture for having given forced swarming, substantially as now practiced, more than 40 years ago.

Geo. W. Brodbeck, president of the California National Honey-Producers' Association, writing us June 20 from Los Angeles Co., said that he finds from observation and reports that had come in up to that date, that their honey season was nearly over, and that the crop is less than one-half in comparison with that of two years ago.

Mr. J. Q. Smith, the new Inspector of Apiaries for Illinois, has begun his work. He says he has put in several days inspecting, and found foul brood in every apiary so far. Surely, an inspector is needed when such conditions exist. He wishes us to invite those wanting their bees inspected to write to him as soon as possible, so that he will know just where to go, and thus better arrange his work. He might go to one part of the State, and then the next call be almost back where he started. He wishes to save all the time he can for work, and not waste it in traveling. Address Mr. Smith at Lincoln, Logan Co., Ill.

Convention Proceedings

Chicago-Northwestern Convention.

Report of the Chicago-Northwestern Bee-Keepers' Convention, held in Chicago, Dec. 3 and 4, 1902.

BY OUR OWN SHORTHAND REPORTER.

(Continued from page 439.)

Pres. York—We have a few more questions here, but before we take them up, I wish to call on Prof. Eaton, chemist of the State Food Commission, who is with us. He has always been in great sympathy with the bee-keepers, and especially pure honey. Dr. E. N. Eaton, of the Illinois State Food Commission.

ADDRESS BY STATE ANALYST EATON.

I am very sorry that I was not with you yesterday, as I understand you had the question of the adulteration of honey up for discussion. I am sure I would have been very much interested in your talk upon that subject, and perhaps I could have helped you in some way, at least by calling your attention to some of the facts concerning the adulteration of honey.

I have not missed a meeting of the Chicago Bee-Keepers' Association, and I did not want to miss this one, so, although the subject in which I am especially interested was discussed yesterday, I thought I would come and listen anyway, although I did not expect to say anything. I believe a chemist, especially one engaged in the crusade for pure food, can get a good deal of good from your meetings. I have noticed the lack of knowledge of many of my colleagues along the practical lines of bee-keeping, and you have noticed it yourselves, I am sure. Just this year there have been two State bulletins published in which the commissioners of pure food declared that comb honey was adulterated, that the comb was artificially manufactured. One of these was from North Carolina, and the other from South Dakota. It was also declared that there was a great deal of glucose-fed honey. Of course, South Dakota has not a chemist. Their chemical work is done at the Experiment Station. That probably accounts for the otherwise very efficient Commissioner making the statement he did; but if these people had attended bee-keepers' conventions they would not have made the mistakes which I am sure did a great deal of damage to the bee-keeping and honey industries.

I noticed with a good deal of pleasure the remarks of Mr. Abbott before the Denver convention, in which he said there was no adulterated honey in Illinois. I am not sure that he made it quite that strong, but almost as strong as that. I suppose you could find a little adulterated honey, but I believe that the markets of Illinois are very free from adulterated honey, at least in comparison with the condition in other States in the Union.

The Illinois Food Commission have six inspectors. They have special instructions to look at the honey on the shelves, to see whether it is labeled correctly; that the adulterated has the word "adulterated," and the name of the producer on it. They also have instructions to take up all suspicious samples and send them to the laboratory for analysis. I have examined a number of samples lately, but haven't found one adulterated; whereas, two or three years ago, over 33⅓ percent of honey sold in Illinois proved to be adulterated.

Mr. Wilcox—I would like to ask Prof. Eaton if there is any danger of the chemist making the analysis being mistaken in his conclusions? Are we not in danger of being improperly judged, or our products? Can they tell to a reasonable certainty? and, if so, how does it happen that a chemist in South Dakota reported glucose-fed honey?

Prof. Eaton—This remark was not made by a chemist, but by a commissioner who is not a chemist, and probably did not seek the advice of his chemist before making the report. I don't know that a chemist could tell whether glucose was fed to bees. However, in case of cane-sugar, I think the chemist could tell in the analysis of the honey whether the cane-sugar was added to the honey. In regard to glucose-fed honey, I believe there is no such article on the market. In regard to the detection of glucose in honey, it is one of the easiest things in chemistry when present in any commercial quantity.

Mr. Wilcox—I notice in the report of the commissioner of South Dakota that there is quite a variation. Now, what causes that difference in the degree of variation?

Prof. Eaton—The variation is caused in part by the varying amount of invert sugar in honey. Cane-sugar is present in small quantities in all honey, from less than 1 percent to as high as 7 percent.

Mr. Moore—Will you tell us what condition the market is in now as compared with before your commission began work—the percent of adulterated honey on the market?

Prof. Eaton—I can not, and I suppose it would be impossible to tell the exact percent of adulterated honey on the market now or at any other time. But before the Food Commission was in existence, the National Bee-Keepers' Association took up the subject of adulterated honey in Chicago, and bought a number of samples on the market indiscriminately, and gave them to me for analysis, and the result of that work showed that at least 33⅓ percent of the honey on the market was adulterated. The first year of the Food Commission we took a good many samples of honey, but, as a rule, we tried to get samples which we thought to be adulterated, which looked suspicious in character. The analysis proved that about a third of this also was adulterated, but I wouldn't want to say that that showed the actual condition of the market, on account of the discrimination exercised in purchasing. This year we haven't been able to find one sample of adulterated honey, but I suppose there are samples of adulterated honey on the market.

If any of the members of this Association have any suspicions as regards any particular honey, or where we may be able to get adulterated honey, I should be glad after the meeting is over, to have you give us the names and addresses of the persons we could get that honey from, and we will purchase a sample from them in the regular way by our inspectors. No name will be given, and it will give us some clew where to go to get adulterated honey.

Pres. York—We find in certain parts of Chicago there is adulterated honey, but it is labeled "adulterated."

Prof. Eaton—I mean honey put up contrary to the food laws.

Mr. Colburn—Let me suggest a point. I don't believe that there is any adulterated comb honey anywhere. We had some adulterated some months ago in Chicago, and a statement from some editor that you couldn't find a pound of pure comb honey—we should make a distinction between extracted and comb honey, so that the public will not be misled.

Dr. Miller—I think he said there wasn't a sample of any glucose-fed honey.

Prof. Eaton—I wouldn't want to say that there is no adulterated comb honey, because we regard the feeding of bees cane-sugar to be an adulteration, and we have found and proved in Illinois that from one apiary there was that kind of honey placed on the market. We bought the samples and proved them to be—and it was afterwards admitted to be—honey that was obtained by feeding bees cane-sugar.

FEEDING GLUCOSE TO BEES.

Mr. Wilcox—I would prefer to ask this question of the bee-keepers. It is the simple question referred to glucose-fed comb honey in Mr. Eaton's first remarks. I want to ask the bee-keepers if anybody knows whether the bees will store glucose. Can you make them store it, or can you make them store cane-sugar in the hives? I have been told by men who have fed barrels of it, and fed it for years, who positively declared that the bees didn't store it in the combs, and will not store it at all.

Pres. York—I am afraid you are expecting a great deal if you want these bee-keepers to confess!

Mr. Niver—Mr. Hutchinson says they won't take it for him, and he says he would like to know if there is anybody else here who has tried it.

Mr. Abbott—They won't take it from anybody, only to keep from starving.

Mr. Armstrong—There is honey in the market labeled "adulterated" that has comb in it. What is the object in doing that? It is intended to deceive, is it not?

Dr. Miller—When they see the comb there they won't look so sharp at the printing on it.

Mr. France—In reply to Mr. Hutchinson I will say that I was considerably interested in the adulteration of honey, but decided to test it before spreading it about. I took a colony, put them into a hive, and starved them for 48 hours; then I gave them pure glucose, and they continued to starve, and there was the same amount in the vessel that there was before. I added one-fourth honey to that liquid; still they continued to starve, until it was one-half honey before they touched it at all, and then only just enough to subsist or live.

(Continued next week.)

Contributed Articles

More About Forced or Artificial Swarming.

BY C. DAVENPORT.

IN my previous article upon artificial or forced swarming I treated the subject in a general way only, but as there are a great many who will no doubt try it for the first time this season, it may interest some for me to give some of my experience in the matter more in detail.

I have in the past said, and I am still of the opinion, that the amateur, or those without experience, can secure better results by allowing natural swarming. While quite a few have reported good results from forced swarming upon their first trial of the plan, there is no question in my mind but what to every one who has reported favorably, a dozen or more have tried it with unfavorable results, and said nothing about it. From this it will be seen that I do not believe with some that this method or control of swarming will greatly increase or revoluntionize our business.

From careful reading of what has been written on this subject, I know that some localities are for some reason more favorable for forced swarming than my own is. For instance, one who has had a good deal of experience reports that with him these forced swarms very seldom, or never, attempt to swarm out or desert after being made. Now, here that is one of the main draw-backs about the plan, for from 40 to 80 percent of these swarms will swarm out within a day or two after being made, the number varying in different seasons. In fact, I do not know but what some seasons I would be safe in saying that over 100 percent will swarm out, for some will come out twice, and in a few instances I have had them come out half a dozen or more times, and sulk around for a week or so in the height of the white clover harvest, before settling down to work.

If it were not for this swarming out, I could produce much more honey each season than I do now. But as the matter now stands, I know from actual experience that I can, one year with another, make more money from one yard than I can by attempting to run one or more out-yards. I mean, of course, without hiring help; and if this is to be done it requires less skill to handle natural swarming than it does to make forced swarms so that good results will be secured.

The last two seasons all the bees I have personally handled were located in one yard. Last season there were 180 colonies, spring count, in this yard, and I secured about 13,000 pounds of honey which averaged me about 10 cents a pound net. I also sold about $100 worth of bees and $20 worth of wax. About a third of this honey was extracted and the rest comb in sections. I did nearly all the work myself, and I had more than I wanted to do, and more, I think, than any man should do.

I have given the results of last season to show that good results can be secured from forced swarming, but I had to be right there every day to attend to the forced swarms, and if I had been running around to out-yards but little in the way of surplus would have been secured from any of them. This matter of one handling a number of yards alone must depend upon locality, for no man that ever lived could do it profitably here. Through June, July, and August one large yard keeps a man moving lively in a fair season, if he does what should be done. Last season I let on shares a large out-yard to a man who has quite a family of children, a number of which are nearly grown up. He allowed natural swarming and also practiced forced swarming, and for awhile it took him, the hired man, and all the rest of the family to handle them. The forepart of the season, though, was the worst for swarming, and the swarms were the hardest to handle that I have ever known.

One of the many mysteries about our pursuit to me is, why; some of these forced, or, for that matter, natural swarms will stay in their new hive and go to work at once with apparently no thought of swarming out, and others, just alike in every way so far as can be seen, and treated in exactly the same manner, are determined to swarm out and loaf awhile before going to work. With some, leaving one frame of brood a day or so prevents swarming out, but here so little reliance can be placed on this that I do not practice it any more, unless for some reason a colony is "swarmed" before they have begun to construct cells. In this case I leave them permanently one or two frames of brood, and if a colony has not got the swarming fever, they seldom attempt to swarm after nearly all their brood is taken away.

I have done a good deal of experimenting in making these forced swarms, trying to find some method or plan by which they could be made that would prevent their swarming out, and while I have not succeeded in this I will give the plan I now practice, which gives the best results of any of the many methods I have tried.

The colony that is to be swarmed is set or moved just back of its old stand, and a new hive, the frames of which contain only starters, is set in the place. Underneath this new hive is placed an empty hive-body without frames, and another without frames is placed over it. If I have made my meaning clear, it will be seen that we have three hive-bodies or stories tiered up, the middle one only containing frames. I now take the frames with adhering bees from the old hive and shake or jar them into the empty top story, when they at once run down into the two lower stories. No brushing is required, for if desired nearly every bee can be jarred from the frames. With the left hand I hold the frame by the top-bar over the empty hive, and then with the closed right hand, I hit the top-bar near the center a sharp, quick blow. After a little practice one can, with two or three blows or strikes, jar nearly every bee from a frame.

After the bees are jarred in, the upper story is removed, and if the old hive had on unfinished sections these are placed on the new hive; or, if they are to be run for extracted honey, a set of extracting combs with a queen-excluding honey-board between the two stories is used. The second or third day the empty under body is removed. The object in having it there is that I have found that for some reason when it is used the bees are much less liable to desert or swarm out the next day or two, and they are also not nearly so apt to loaf or sulk for a few days. When only one story is allowed at first a good many of the bees, especially if the weather is very warm, will come out and cluster on or under the hive, and in some cases loaf there for a week or more. Here, if there are no unfinished sections to place over the new or made swarm, the conditions are very seldom such that sections with either starters or full sheets should be given a new colony until they have considerable comb built in the brood-chamber; for at all times when honey is coming in, excepting some heavy basswood flows, so much pollen is also being gathered that enough of it would be stored in many of the sections to spoil their sale.

In this locality, one, if not the most, important matter in regard to artificial swarming is the disposal and management of the removed brood. The white honey-flow here usually commences the forepart of June and lasts until the latter part of July. This gives a flow of from 40 to 60 days in length, and a swarm, either natural or forced, that is not re-inforced by the young bees from hatching brood greatly decreases in its field-force long before the flow is over. While, of course, many of these field-bees are old and about used up at the time the swarm issues, or is made as soon as there is considerable brood in the new hive, it takes a large number of bees for hive or house work that would be free for the field if the new colony is re-inforced by young bees from the old hive. Southern Minnesota.

Inner Life of the Hive—Spring Feeding.

BY ARTHUR C. MILLER.

If I may judge by Mr. Dadant's article in the "Journal" for May 28, he took my remarks of April 30 as a personal attack. I much regret his doing so, for I hold him in high esteem both for his scholarly attainments and for his accomplishments in bee-keeping. Also, I have often profited by his writings.

In his reply to the article cited he has apparently assumed that my knowledge of the internal life of the hive is but superficial, and that also my opinions on the value of spring feeding are based on theory rather than on practice. Before taking up this latter point I want to discuss some things concerning the inner life of the bee-colony.

If it is not too egotistical perhaps I may be permitted to intimate that possibly I am ahead of Mr. Dadant on some of the habits of the bee as he considers he is ahead of me in practical bee-keeping. When I asserted that bees *never* hold out their tongues and offer food to the queen, I meant just exactly that. *Food is never given on or by the tongue*, all previous assertions to the contrary notwithstanding. Also, so far as I can as yet tell, nectar-gatherers *never* turn their loads over to the young bees, but young bees do sometimes supply the field-workers with chyle.

Regarding "deference:" The term "king-bee" and "queen-bee" were given because where the queen went there went the bees also, as Mr. Dadant will readily see by a perusal of ancient works. True "deference" had nothing to do with it except as it existed in the imagination of the writers.

Bees backing out of a queen's way is more apparent than real. They will just as readily move aside for any other bee moving as deliberately forward. Also, there are, I believe, physiological grounds for the bees backing or moving away to avoid the queen.

If Mr. Dadant thinks he has seen food *offered* on the *tongue* and deference shown, etc., I beg him to look again.

I have quite as much respect for the "old masters" as has Mr. Dadant, but they are as far from being infallible as we are.

Dr. Gallup told of an "umbilical cord," and Mr. Doolittle forthwith discovered it "ramifying all through the royal jelly" of his queen-cells (although Dr. G. said it did *not* so ramify). Both posed as leading lights, but both were wrong. Not very reliable "old masters" to tie to. A little study of Cowan's "Honey-Bee" would have shown what the supposed cord really was, *i. e.*, the last cast of the larva with its silken attachments.

Regarding feeding: I said that I found stimulative feeding in the spring was always done at a loss, and Mr. Dadant has quite unwittingly sustained me in it, as I will presently show.

Mr. Dadant cites a colony which doubled its size in 30 days on account of a "one bee at a time" food-supply. A little arithmetic should convince him that some more potent cause *must* have been behind that increase, for if when the "feeding" began the colony was of a size represented by "two" (2), and as it takes a bee 21 days to mature from the egg, but nine days of that feeding can be counted as having contributed to the increase of bees visible at the end of the 30 days. This is a problem which will interest Mr. Hasty.

Now I will quote from Mr. Dadant, and let him prove my case for me:

"The present season is a very good one to show the advantages of stimulative feeding in the spring, and when I had read Mr. Miller's letter in the evening, we had just been feeding some 60 colonies. I say that the present season is a good one for feeding, because it is a very irregular one. [I would contend that it was just the one to avoid it.—A. C. M.] In a season when the winter is long-protracted, and the bees are confined to the hive until late, and in which the crop, once begun, it continues uninterrupted, feeding will do harm if begun too soon, and will do no good after the bees have commenced harvesting honey. But when the colonies have been breeding as they have this season, a little early, and a change in the weather is causing them to stop, a little judicious feeding stirs them and causes them to continue breeding. *If we fed colonies that were heavy with honey, we would make a mistake.* [My italics.—A. C. M.] If we fed when the days were so unpleasant that the bees that went out foraging would die of cold we would do the bees damage. [In other words, we must do intermittent feeding, and yet, in the slowly fed colony above cited, he attributed its gain to the slow, *steady* supply of food.—A. C. M.] But the colonies which discontinue their breeding because of a change in the weather when the weather is so they can still fly, but find nothing, will be benefited by stimulative feeding."—Page 344, May 28, 1903, American Bee Journal.

As I interpret the foregoing quotation it amounts to this:

When a *change* of weather *checks* brood-rearing we should feed to start it, but we should not feed when the weather is against safe flight. Ergo, when the weather is good, breeding goes on unhindered, and when it is foul we must not feed lest it induces fatal flight.

To quote again from Mr. Dadant, where he refers to a group of colonies for some of which much honey was extracted in the fall, and some others which were left untouched:

"The colonies that had crooked combs, were left with all their stores—10-frames [Quinby frames.—A. C. M.], because we could not disturb them without breaking combs, and causing leakage and robbing, and it was not the proper season to transfer them. *These colonies did not have to be fed the following spring, became very strong, and yielded the largest crop.* [My italics.—A. C. M.] This untried-for result caused us to make further experiments, which proved that *there is a profit in leaving, to strong colonies, a large quantity of honey so that they will not limit their spring breeding.*" (Mr. Dadant's italics). Revised Langstroth, page 329.

Compare this paragraph with the other, and see which system Mr. Dadant found most profitable.

If we conduct any work so that it yields less profit than if conducted in another way, we are losing. Mr. Dadant says the fall-supplied colonies were the most profitable. As it is cheaper in time and labor to fill up the colonies in the fall than to dabble along food in the spring, and as the fall-filled colonies pay the most, I am justified in saying that spring stimulative feeding is conducted at a loss. I did not say, nor intend to imply, that colonies could not be built up by such feeding, but that it is not profitable.

Providence Co., R. I.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Feeding Syrup in the Spring.

The corner allotted to us is very nice. I hope it will grow and prosper in the future as it has in the past. I should like to ask through your department if I can feed bees in the spring with syrup, and how much I am to feed them at a time when they are short of stores?

Lake Co., Ill., June 8. Nettie A. Munson.

Answer.—Yes, you can feed them in the spring with syrup. The amount depends somewhat upon how short of stores they are. If they are entirely out, 10 or 15 pounds is none too much.

Managing Colonies that Store Watery Sections.

A few years ago we had a couple of colonies of Punics. They were hardy bees and good gatherers, but filled the sections so full of honey that they left no air-space, and when capped they looked black and greasy. We had concluded that we could not use them for comb honey, when one day a bright idea occurred to us to let them fill the sections full of honey ready to seal, then take them away and give to a colony that did extra-white work in sealing, and the result was very satisfactory, and we had a lot of beautiful white sections. If you have any trouble in that way, just try it and see how nicely it works.

Keeping Bees With a Baby.

I do all of my house-work, not including washing, and have a young baby, and no help but my little 5-year-old son. I am one of the "sisters" "who paddles her own canoe" with the bees. My husband does not like to "fuss" with them, but sometimes I am just obliged to have him. For instance, I had a swarm in the top of a tree, and I told him if he didn't want to see me up that tree he would better go after them. Well, he went.

I had a letter partly written to you some time ago, but have been sick for a month, so it was not finished. Yes, there are questions I want to ask, and lots of things I want to discuss with some one who actually *knows* something. I am grass-green on bees, and my neighbor bee-keepers are even greener. I have only 10 colonies (3 new swarms), and haven't the chance to attend to them as I should. I rush out to them when the baby takes her long nap, and then often have to stop in the "thick of the fight" if she chances to awaken. I love the bees though, and dearly love to attend to them. Our department is all right. I enjoy it much, and wish I could say something of value to some one else.

I have had some success, but it was not due to anything smart that I did, I don't believe. Failures? O yes, a plenty—scored another this forenoon, when I undertook to get ahead of the baby by getting up before day in order to get breakfast in line, and be ready to take off some honey by the time it was light enough to see. Not having enough supers, and not wishing the bees left without anything for supers, I thought to take out sections and refill at the hive, but those bees were *all* at home and made a bold stand for their ground, regardless of smoke. I was afraid to smoke them too much for fear they would uncap the honey (as a colony did last year). Therefore, I retreated in disorder, and resolved to renew the attack when the bees were busy in the field. We have kept bees for about five years, but paid them very little attention until recently I have taken them for my "hobby."

The American Bee Journal has been of great benefit. It comes to me on Saturday, and I sit up and read it through that night. I don't want to be tempted to read it on Sunday. I hope to add another "sister" to the subscribers' list soon. I received a nice queen from Editor York last year, and reared some queens from her. These bees are doing the best work this year. By another year I hope to have all Italians, and all queens clipped—that is, if the baby consents.

There is so much I want to say, but this is already so long; but I hope you will let me come again.

Mrs. C. D. Mears.

Princess Anne Co., Va., May 26.

That blessed baby will be helping you with the bees one of these days.

A Poor Honey-Year.

This is a poor honey-year so far. We had a hail-storm that ruined the alfalfa bloom, so we get no honey from the first crop. Bees are working on white sweet clover. We have three acres in full bloom. We have a few bunches of the yellow also. It blooms two weeks earlier than the white sweet clover. I had to feed my bees until June 15 this year. Last summer two of five supers were filled nicely on June 14. This is the 29th, and the first sections are about half full. Mrs. Ben. Ferguson.

Ford Co., Kans., June 29.

Six Years With the Bees.

I started bee-keeping six years ago with one colony of Italians, and at present I have 10 colonies, all in 8-frame, single-walled hives. I am running for comb honey, extracting the unfinished sections, and sometimes sell colonies on the frames. I do not have much time to spend with my bees, but I do all the work connected with them myself, unless a swarm clusters too high, when my father takes care of it.

I have been quite successful in wintering bees on the summer stands (provided they have plenty of stores in the fall), by placing an empty super on the hive and filling with oat-chaff, with, of course, the usual cloth and Hill's device under. And, by the way, I make my own "device" from barrel-hoops.

Last season the colonies that did not swarm stored some honey, and the others sent out their swarms so late that none gathered more than enough to winter on. I fed two or three in the fall.

I like to read the articles in the "Sisters" department, but wish there were more of it.

I aim to keep my bees strong rather than to increase in number. Emma A. Lyon.

Fairfield Co., Conn., May 28.

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Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

PLACING COLONIES IN THE SPRING.

Unexpected to me that a majority of the Wisconsins favor taking the care needed to return bees to the same stand as previous year, when taking them out of the cellar. Pleasant surprise, however. I think the greatest advantage of this is a personal and scientific one—get acquainted with the individualities of the individual colonies better if you always have them in the same place. Page 340.

ODD FIXTURES IN THE APIARY.

A. M. Gill strikes well for uniformity of fixtures when he says: "O the exasperating bother, if a man wants a super, and the first four or five he comes to belong in some certain place! Still this would apply mainly to keeping hives that will not agree *in numbers*. Let the boys who hanker after that sort of experience experiment with odd ones, one or two of a kind. The odd fixture and no others *might* be kept in a corner wholly their own. Page 342.

HIVING SWARMS FOR THE DEAR WOMEN.

Dire situation to be in—and all mankind except we'uns are liable to get into it! Nice lady with a nice daughter, and they beseech him to get down their swarm of bees from an ugly place and hive it. Pause here, flippant bee-man, and consider once such a fellow mortal's feelings. He would rather participate in a battle; but there stand the ladies. Sweetly they stand in the unreason of womanhood. He knows they are thinking, "*Men* hive bees and consider it a mere trifle;" and what man has done surely such a nice gentleman ought to be able to "can do." He is afraid, to the heart-sinking point; honestly has a right to be afraid, considering his ignorance, yet without any fault of his own he must be cat's-paw to get the chestnuts out of the fire—or say, get the little fiery, flying chestnuts down from the tree. Page 345.

THE FLOUR-MILL A CURSE TO BEES.

And so the Mill-Flower which *flours* night and day, winters and all, is largely a curse when it flours neighbor to an apiary. Must be allied to the Venus' Fly-Trap botanically, seeing bees go into its flours and don't come out again. Page 350.

THOSE NON-SWARMING, FOUL-BROOD-PROOF BEES.

Sad that Dr. Miller should have to lose his new strain of non-swarming, foul-brood-proof bees! When florists have a nice, new thing that will not produce seed they propagate it from slips. Tell Dr. Miller to take those scissors (well accustomed to such work) and snip off one of the queen's legs. Plant the leg in a tiny pot of royal jelly, and try hard if influences can not be found stimulating enough to make it grow. Faith says that when one mode of propagation is denied another is supplied. Page 355.

BEE-EXCRETIONS ON THE HIVE-WALLS.

I don't believe that poisonous excretions from bees accumulate from year to year in the wall of a hive. No more in a board that has been a hive side for ten years than in one only in use two years—my doctrine. However, the idea may not be so utterly absurd as at first it seems. Seems at first like the alarm of a non-practical, professional bogy-hunter, desperately hard up for a live bogy. Page 355.

THE VARIOUS STAGES IN BEE KEEPING.

Yes, Mr. Morley Pettit, it's an era in the bee-boy's life when he can first get stung without crying. Who knows but we have seven eras, *a la* Shakspeare? First, the fool baby, escaped, and scooping bunches of bees into its mouth. Second, the fool boy, on warpath, throwing clubs, or heroically making a dash at the entrance with a shovel filled with dirt. Third, the wise boy—reclaimed savage—anxious to help, puffing at the smoker, and taking stings with philosophy. Fourth, the youth, full of exploits, chasing runaway swarms, and bringing difficult ones down. Fifth, the fool man, inventing hives, and turning the bee-world upside down. Sixth, the enlightened man, planting out-apiaries, and shipping his car-load of honey. Seventh—same as all the other "lean and slippered pantaloon" sevenths, except that in his whining he whines that the younger generation are using all his wise ways and inventions, and giving the credit all to somebody else. Page 356.

VALUE OF REPORTING CONVENTIONS.

The habit of attending conventions and reporting the main points of value for some paper which may wish a report, is praiseworthy. Especially wise is the reason—get a clearer idea one's self what the really valuable things were—and remember them far better. Page 356.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Brood Cappings Gnawed Off.

In looking into a colony of bees to-day, I found a good many cells of sealed brood with caps gnawed off. Some of the brood was nearly ready to hatch, but a good deal of it was white. Fully half of the brood was thus gnawed. What was the cause? Can anything be done to stop it?

MINNESOTA.

ANSWER.—Hard to tell without seeing it. Possibly it is the work of the wax-worm. If so, the easiest way to prevent it is to have strong colonies of Italian bees, for they will keep the wax-worms out.

◆

Moving Bees 250 Miles on a Wagon.

Desiring to move about 50 colonies of bees some 250 miles by wagon, I would like to have you tell me whether, in your opinion, they would go through all right if moved in the month of October, when the weather is beginning to get cooler, and when they are properly prepared with wire-cloth over the entrances. At that time of the year the brood would be nearly all gone in this locality.

COLORADO.

ANSWER.—Yes, they ought to go all right. If just as convenient, the spring-time would be better, because the combs are lighter at that time, and spring is naturally a better time to recover from the journey. But if the combs are wired, or if they are old and tough, there ought to be no trouble about their breaking out when heavy with honey in October. Even in the cool weather of October, the shaking up of so long a journey may make it advisable to sprinkle a little water on them once or twice during the journey.

◆

Queenless Bees—Queen in Supers.

1. I have a colony that sent out a very small swarm May 17. A few days ago I noticed the parent colony did not seem very strong. I looked into the hive and found a small amount of bees, and I think nearly half were drones with no sealed brood or eggs. Do you think they are queenless? If so, what shall I do?

2. I have a colony that is strong and is working in the supers. It sent out a swarm June 22, and after the swarm went out I looked into the hive and found about one-half of the sections filled with honey and the rest with brood. Now, what was the cause of the queen going into the super? and what shall I do to prevent further trouble in that way? What can I do with the sections that have the brood?

MAINE.

ANSWERS.—1. They have been pretty certainly queenless five weeks or more, and having only a few workers, the best thing you can do is to break up the colony, giving the combs and bees to other colonies.

2. The queen may have been crowded for room to lay in the brood-chamber, or she may have gone into the super to lay in drone-cells, if drone-comb was scarce in the brood-chamber. A queen-excluder would prevent the queen from going up into the super, but that is hardly necessary. If

the sections are entirely filled with worker foundation it will make a great difference, for then there will be no drone-comb in the sections, and no temptation for the queen to go up into the sections to find such comb. I use no excluder, but the sections are filled with worker foundation, and not one section in a thousand has brood in. Perhaps the best thing you can do with the sections containing brood is to leave them on the hive till the brood hatches out and the bees fill them up with honey. They will not be of first quality, but will make good eating, and you will thus save the brood.

◆

Drone-Brood in Extracting-Supers.

How do small patches of drone-brood get above the excluder in extracting supers over strong colonies, which seem to have a good queen? PENNSYLVANIA.

ANSWER.—I don't know. If your excluders are not all right, it is possible the queen gets up.

◆

Bees Carrying Queens Out.

One year ago I commenced with 4 colonies and increased to 15 by natural swarming and dividing, then requeened 10. They went into winter quarters with plenty of stores until the first of March, when set out, and they had a nice flight for two days, and brought in some pollen. At that time one colony had died from lack of stores. They were then put back into the cellar and remained until the first week in April when they were removed to their summer stands. Then they began to dwindle and soon after five of them carried out their dead queens. They still persisted in carrying out their queens until I have but one left. In this locality some have lost 50 percent, and some 100 percent.

1. What caused the bees to lug their queen out?

2. After queens are successfully introduced that come from different localities, are the bees more liable to destroy them than those reared in the same apiary?

3. I bought 11 queens from different queen-breeders, and lost them all but one through the spring, that being one I introduced for a friend. What was the cause? MAINE.

ANSWERS.—1. I don't know. Of course I know they lugged them out because they were dead, but I don't know the cause of their death. I have had some losses of queens in that way, but never in such a wholesale manner.

2. I think not. You seem to think that the bees killed the queens. I think hardly.

3. That comes under the same head as the first question, and of course I don't know. If any of the fraternity can throw any light on the matter it will be thankfully received.

◆

Returning After-Swarms.

Can an after-swarm be returned to the parent hive? If so, how shall I proceed? MAINE.

ANSWER.—The easiest thing in the world. Just dump the swarm down in front of the hive and let them run in. It was the old-fashioned way of treating after-swarms, and there's no better way, if you don't mind the trouble. Just return the bees every time they swarm out, and when all the queens have emerged there will only be one left, and there will be no more swarming. Indeed, you may carry the plan still farther, returning the prime swarm and all after-swarms. That will give you no increase, but the largest yield of honey, especially if your harvest is early.

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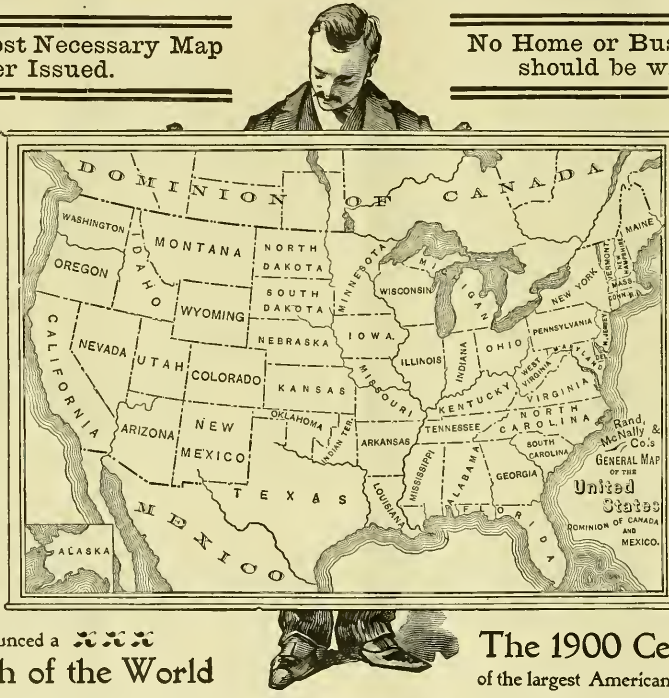
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FROM MANY FIELDS

Honey Crop All Right.

The honey crop in southern Wisconsin is immense—white and sweet clover and basswood now all yielding. H. LATHROP.
Green Co., Wis., July 6.

Less than an Average Season.

The bees seemingly are gathering honey from white and red clover, and have 48 to 72 one-pound sections on each hive, and if the weather holds favorable they will, no doubt, fill 75 percent. The season will be less than the average, I think. Not much swarming so far this summer. But I am holding in check the swarming impulse; letting only my high-grade superior queens make increase. Some of the best are not swarming; so I shall "swarm" them by moving the queen and nearly all the bees from their old combs to a hive with empty combs on the old stand, placing all supers on the hive on the old stand.

My bees wintered without loss, but April was very cold. I lost a few by starvation before I discovered their condition.

I never saw red clover so profuse as this year; such large, generous heads, while the white is no more abundant than ordinary years. CARSON VAN BLARICUM.
Calhoun Co., Mich., June 24.

Variable Time for the Bee-Man.

The bee-man has had a variable time here this season. Right in fruit-bloom, when the bees were just getting to the front in big shape, we had a lot of snow and freezing weather. Then the last week in May the white clover began to bloom, and we had three weeks of rain and cold weather, so the bees could not fly. Now the weather is favorable and they are doing well, but we are wondering what will happen next.

J. M. LINSCOTT.
Gage Co., Nebr., July 4.

Getting Honey!

I've good news to tell you. We've been getting honey. Such nice honey, light-colored, and so very thick. White clover has been so rare of late years, but this year I never saw such a bloom of it. The great, large heads touch each other, and what delights us so much is that they secrete nectar. Aren't you glad?

The basswood is in full bloom to-day, but I do not believe the bees are profiting by it, for they are very cross and robbing hives containing comb. This bloom comes out all at once, and occasionally there is one great honey-day from this source. There is much sweet clover blooming, but the city fathers have ordered all weeds cut on vacant lots and elsewhere, as a health measure. What harm can there be in fragrant sweet clover? Cut it down and let it rot in piles, there may be.

It is hot and dry, and blue-grass is turning brown. We are wishing for rain.

MRS. L. HARRISON.
Peoria Co., Ill., July 1.

A Blacksmith Bee-Keeper.

I have seen nothing in the "Old Reliable" from this locality, so I will try to encourage my brother bee-keepers never to take fail for an answer. Bees are doing well. White clover is plentiful with an abundance of wild bloom. I have increased from 6 colonies to 16 this season. There was a swarm of bees came over on Sept. 20, 1902, and went into my neighbor's chimney, and I transferred them the same day to an 8-frame Langstroth hive, and they wintered on the summer stand and came through in good shape; sent out a swarm June 1, 1903, and I hived them; but there is the rub. I just got them in nicely, and out came another from a box-hive. I covered hive, bees and all with bee-canvas, but of no avail. They covered the ground for 20 feet square on the grass, weeds and bushes, and they know how they united, I don't, for the canvas was held down tight by boards. Now, June 29, they have 70 pounds of comb honey by actual weight. I don't know whether that is the best or not, but it is good enough for me.

I would just as soon have a box-hive in June as a good swarm on a tree, only for extra labor. I smoke them at the entrance, then turn the hive upside down, place a box over them, put the new hive on canvas, and drum and smoke till the queen and majority of bees go up. Then empty them in front of the hive. Then I use an ax, take out the honey, and let the old brood and crooked combs go to the comb-box. I have transferred five with greatest success, queen always going up, and they go right to work. I used only starters one-half inch wide, but full foundation is better.

I am a blacksmith, and I go about my bees with sleeves rolled up, wide open collar, and no veil. I believe bees know a coward.

A. M. Hoover.

Vermilion Co., Ill., June 29.

Poor Season for Bees.

I don't know whether I will get honey enough to pay my subscription to the different bee-papers or not. Last year was a failure on account of wet, cold weather, and this is no better so far. I had two colonies to starve about two weeks ago. I did more feeding last fall and this spring than I have altogether for ten years. Two years ago I introduced 16 new queens. Some of them died the first winter, and last winter they all died but five, and only two of them are doing any good. I have bought a good many queens in my time, and I remember only two that lived over two summers.

If the weather continues cold and wet the balance of this season I will be looking up another climate, perhaps Delaware.

Clearfield Co., Pa., June 29. G. W. Bell.

Best Season in 15 Years.

We are having the best honey season here that I remember for 15 years. Last year's all season's rain started the white clover, and the past spring rains have kept it gowing so that our pastures, and even old meadows, are nearly knee-deep with it. It's a beautiful sight to us bee-keepers.

I have 15 acres of alsike clover which the bees seem to prefer to the white. The linden, or basswood, bloom is poor this year, but we do not need it.

My bees are doing quite well. I have mostly blacks. I find them best for comb honey. One of my black colonies had gathered over 100 pounds of fine comb honey about the middle of June, when they cast their first swarm.

I have been fairly successful in preventing swarming. I increased from 20 colonies to 30. Most of them are working in two supers, a number in four and five supers. They will average 100 pounds, spring count.

Linn Co., Iowa, July 4. Jas. R. Smith.

Alfalfa in Michigan.

I am a new reader of the Bee Journal, and have become quite interested in some of the articles, especially the talk on alfalfa at the Chicago-Northwestern convention, as reported in the issue of June 25. I live in southeastern Michigan, about 40 miles north and west of Detroit. I have just started in with bees this spring, and hived my first swarm June 18. It was a pleasure to watch them adjust themselves so quickly to their new home and go to work. It was pretty cool and wet this spring up to about the middle of June, when it warmed up some, and now it is fine summer weather, and the busy little bee is now making up for lost time.

White clover and alsike are the present honey crop. There is a field of alfalfa a few rods west from me, but I can not discover any bees at work on it. I am sure it is not because there is no honey in it, for the nectar

Stanley Queen Incubator and Brooder

An Arrangement that Allows the Bees Access to the Cells and Queens at all Times.

(Patent Applied for.)

One of the greatest objections urged against a lamp-nursery, or any kind of a nursery where queens are hatched away from the bees, is that the cells and their inmates are robbed of the actual care of the bees. When the bees have access to a cell, and the time approaches for the queen to emerge, the wax over the point is pared, and, as the queen cuts an opening through the cell, and thrusts out her tongue, she is fed and cheered in her efforts to leave the cell. A queen hatched away from the bees loses all of this food, cheer, and comradeship; and, until introduced to a necleus, or full colony, has not the natural food that she would secure were she among the bees.

All of these objections are overcome by an invention of Mr. Arthur Stanley, of Lee Co., Ill. Mr. Stanley makes the cell-cups according to the directions given in Mr. Doolittle's "Scientific Queen-Rearing," sticking the base of each cell to a No. 12 gun-wad. By the use of melted wax these wads, with the cell attached, are stuck, at proper intervals, to a strip of wood exactly the length of the inside width of a Langstroth brood-frame. Two wire staples driven into the inside of each end-bar, slide into slots cut in the ends of the cell-bars, and hold them in position.

The process of transferring larvæ to the cells, getting the cells built, etc., have all been described in the books and journals, and need not be repeated here. When the cells are sealed they may be picked off the bar (still attached to the gun-wads); and right here is where the special features of the Stanley process steps in. Each cell, as it is removed, is slipped into a little cylindrical cage, made of queen-excluding zinc, the cage being about two inches long, and of such a diameter that the gun-wad fits snugly, thus holding the cell in place and stopping up the end of the cage. The other end of the cage is plugged up with a gun-wad. Long rows of these cages, filled with sealed cells, are placed between two wooden strips that fit in between the end-bars of a Langstroth frame are held in position by wire staples that fit into slots cut in the ends of the strips. To hold the cages in their places, holes, a trifle larger than the diameter of the cage, are bored, at proper intervals, through the upper strip, thus allowing the cages to be slipped down through the upper bar, until their lower ends rest in corresponding holes bored part way through the lower bar.

A frame full of these cages, stocked with cells, may be hung in a queenless colony, and will require no attention whatever except to remove the queens as they are needed. The workers can freely pass into and through the cages, cluster upon the cells, care for them, and feed the queens after they hatch, exactly as well as though the queens were uncaged.

These cages are unsurpassed as introducing cages, either for fertile or for virgin queens. The bees are not inclined to attack a queen in a cage to which they can enter, yet they can surround, caress, and feed her. They can become acquainted with her, and give her the same scent as themselves. When desirable to release her, one end of the cage can be stopped with candy, and the bees allowed to liberate her by eating it out.

By putting food in one end of the cage a queen may be kept caged, away from the bees, the same as any other cage.

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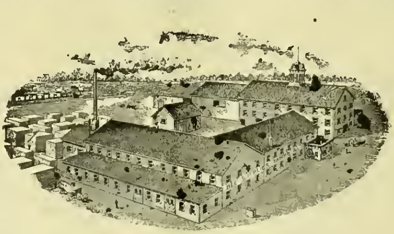

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Dept. Mgr., H. M. Horton, Director Nat'l Fanciers' Association.

is very much in evidence when you pluck the little blossom from the stem and draw it through your teeth, just as we used to do with the June clover to extract the sweet from that. My theory is, that the alsike and white clover, which blossom here the same time that the alfalfa does, being a regular and familiar plant, draws the entire attention and energy of the bees to them. These two plants yield more honey, too, I think, than the alfalfa contains. The piece of alfalfa I referred to substantiates the statement made by "A Member" in the convention discussion; for most of this field is made up of hill, side-hill, gully, and low spots. The heaviest plant yield is on the slopes in the lightest soil, mostly gravel. The heaviest soil (clay) and the low spots have very little of the plant-growth. J. H. DAVIS.

Livingston Co., Mich., June 30.

Honey Crop a Total Failure.

The honey crop is a total failure to date. It rains all the time, and bees can not get any honey, and the clover and raspberry bloom are nearly gone. A. W. SMITH.

Sullivan Co., N. Y., June 29.

A Deaf Lad and the Bees.

Some days ago a deaf friend of mine and his wife came to my house for dinner, as did several other deaf people. The friend told a story on himself, which is too good not to pass on.

When he was a lad of 12, up in Michigan, he saw a man selling bees by the pound, and having a crowd around him. The man, after "working his jaw" presumably on the in-

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Add 25 cents to your order, for cartage, if wanted by freight, or 10 cents per pound if wanted by mail.

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Golden Italians Have no superior, and few equals. Untested, 75 cents; 6 for $4.00.

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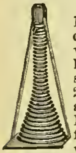

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dustry and gentleness of the bees, would slowly dig his hand into the bees and scoop up a handful and put them in his hat on his head, and then "work his jaw" some more, presumably, etc. After he paused the little deaf lad went up to him, and in the sign language, asked the seller to be allowed to try the trick himself. On the consent of the man the crowd widened out to a safe distance, laughing and winking. Up marches the little boy to the box, goes the seller one better by dipping his hand in twice, not reckoning on the low crown of his hat. He put it on slowly, but pinched one bee, and she gave it to him on the very top of his head. With all the crowd before him he controlled his nerve, made obeisance to the crowd, took his hat off and shook the bees out; then, as soon as he could, without attracting attention, he slunk off and put a cake of mud over the sting.

The story, to be appreciated, should be acted out in the graphic sign-language. The way he grimaced the moment of the sting brought convulsive laughter and tears.

CHAS. R. NEILLIE.
Cuyahoga Co., Ohio.

Honey from the Maples.

We are having very much rain and dampness. Basswood is yielding some honey. I took off of two hives about 65 pounds of maple honey. It looks amber, just like maple syrup, and also has a decided maple taste. It is extremely mild. This was taken off on June 13. The supers are full again. After I take them off I will let you know the results.

CHARLES E. KEMP.
Baltimore Co., Md., June 26.

Bees Did Well—Arizona.

Bees in this locality have been doing well this spring. One of my colonies stored over 100 pounds of extracted honey from raspberry and white clover during June.

Swarming, so far, has not been very extensive, but for swarms I am not so particular.

Basswood buds are nearly ready to burst. Then the bees will have a big time. Why is it that we do not hear from some of the fraternity in that "Land of Sunshine," the Salt River Valley, Ariz.? Possibly it is because they are too busy; if such is the case we can excuse them, but I believe if they tried they could spare a few minutes to let their friends know if they are still in the bee-business.

As far as I can see the only report for Salt River Valley during the past four or five years must be credited to A. J. Bridenstine.

Now, bee-keeping friends, I used to live in Arizona and keep bees. I am acquainted with a good many bee-keepers there who could give glowing reports of honey crops. Now, let us hear from you. I am still interested in my old home, and all the bee-keepers there.

If the "Old Reliable" is a visitor at your place I am sure the editor will grant you a small portion of space for a report on bees once in a while, or oftener.

Enclosed please find a specimen of plant the name of which I would like to know. I do not know if it is of much consequence as a honey-plant, but the bees seem to be busy on it at times, but whether they gather honey or pollen I have not been able to ascertain.

Benzie Co., Mich., July 2. B. L. BYER.

[Our botanist is on a vacation in Pennsylvania for two months. Doubtless Prof. A. J. Cook, of Claremont, Los Angeles Co., Calif., will name plants on receipt of specimens with postage stamps.—EDITOR.]

An All-Around Bee-Keeper.

In our locality white clover was never finer and it is 17 years this summer since we have had near its equal. I am the bee-doctor of the neighborhood. This p.m., from 2 to 5 o'clock, I rode 10 miles on my wheel, changed a swarm from an old box to a frame hive, removed 56 pounds of honey, and examined 13 other colonies to see to their needs, visiting two separate yards for the work.

June 30, I went to the ridge of a two-story

(Exact size of the Pen.)

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This pen consists of a **hard rubber** holder, tapering to a **round point**, and writes as smoothly as a lead-pencil. The **point** and **needle** of the pen are made of **platina**, alloyed with **iridium**—substances of great durability which are not affected by the action of any kind of ink.

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Honey Queens (Untested)..	$ .75	$ 4.00	$ 7.00
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Golden " (Untested)..	.75	4.00	7.00
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2-frame Nucleus (no queen)	2.00	11.00	21.00

Breeders, $3.00 each, after June 1.

Add price of any Queen wanted with Nucleus.
Our bees are shipped in light shipping-cases.
Purchaser pays express on Nuclei.
Safe arrival guaranteed of all stock sent out.

BATAVIA, ILL., Aug. 21, 1901.
Dear Sir:—I thought I would let you know as to results of the nucleus sent me. They were placed in 10-frame hives and now they are in fine condition. From one I removed 24 pounds of honey and had to give 6 of them more room, as they were hanging out. They have more than reached my expectations.
Yours respectfully, E. K. MEREDITH.

DAVENPORT, IOWA, Dec. 31, 1901.
Your queens are fully up to standard. The honey queen that you sent my brother takes the lead. She had a rousing colony when put up for winter. The goldens can be handled without smoke or veil. Very truly yours,
JOHN THOEMING.

Notice. — No tested stock sent out before May 15. Send money by P. O. Money Order or Express Order. **D. J. BLOCHER,**
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house and the top of the chimney and removed 8 to 10 pounds of new comb honey and sent the bees out. A board over the chimney-top and holes between the brick lower down made an attractive place. Who has gone higher?

I am caring for 21 colonies, and among them are two that are now ready for their fourth supers, each containing forty ¾-inch sections, all from white clover. Neither have swarmed this year. Who can beat that record? Others run from 50 to 80 pounds each, according to strength and swarming fever. Swarms are generally numerous. While I work the bees I have a deputy working the office. M. L. BREWER.

Champaign Co., Ill., July 4.

Good Prospects for a Crop.

The prospects for a honey crop are good, with an abundance of white sweet clover and basswood all now in bloom. D. L. DURHAM.

Kankakee Co., Ill., July 3.

Best Season for White Clover.

This has been the best season so far for white clover I ever saw. The bees have about trebled themselves. I cannot make hives fast enough to supply the demand. I use 10-frame hives. I have some colonies that have filled two supers, and have two more nearly filled. I began with 13 colonies in the spring; 6 of them were in boxes and old American hives. Some of my first swarms have filled one super. I had a large swarm to-day from one of my first swarms one month old. I have tried to keep back swarming as much as I could. ANDERSON YORK.

Davis Co., Iowa, July 4.

Close Saturdays at 1 p.m.—Our customers and friends will kindly remember that beginning with July 1, for three months we will close our office and bee-supply store at 1 p.m. on Saturdays. This is our usual custom. Nearly all other firms here begin the Saturday afternoon closing with May 1st, but we keep open two months later on account of the local bee-keepers who find it more convenient to call Saturday afternoons for bee-supplies.

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Bee-Keeper's Guide, or Manual of the Apiary, by Prof. A. J. Cook, of Pomona College, California. This book is not only instructive and helpful as a guide in bee-keeping, but is interesting and thoroughly practical and scientific. It contains a full delineation of the anatomy and physiology of bees. 544 pages. 295 illustrations. Bound in cloth. 19th thousand. Price, $1.20.

Langstroth on the Honey-Bee, revised by Dadant.—This classic in bee-culture has been entirely re-written, and is fully illustrated. It treats of everything relating to bees and bee-keeping. No apiarian library is complete without this standard work by Rev. L. L. Langstroth—the Father of American Bee-Culture. It has 520 pages, bound in cloth. Price, $1.20.

A B C of Bee-Culture, by A. I. & E. R. Root.—A cyclopedia of over 500 pages, describing everything pertaining to the care of the honey-bees. Contains about 400 engravings. It was written especially for beginners. Bound in cloth. Price, $1.20

Scientific Queen-Rearing, as Practically Applied, by G. M. Doolittle.—A method by which the very best of queen-bees are reared in perfect accord with Nature's way. Bound in cloth and illustrated. Price, $1.00; in leatherette binding, 60 cents.

Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—It is nicely illustrated, contains 160 pages. Price, in cloth, 75 cents; in paper, 50 cents.

Advanced Bee-Culture, Its Methods and Management, by W. Z. Hutchinson.—The author of this work is a practical and entertaining writer. You should read his book; 90 pages; bound in paper, and illustrated. Price, 50 cents.

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HONEY AND BEESWAX
MARKET QUOTATIONS

CHICAGO, July 7.—At present there is little call for comb honey, some new is offered, and for fancy 14@15c per pound is asked. Extracted sells at 6@6½c for best white; amber grades, 5@6c, depending upon flavor, body and package. Beeswax, 30c. R. A. BURNETT & CO.

KANSAS CITY, June 30—No comb honey in this market. New white comb would sell for $3.50 to $3 75 for 24-section cases; amber, $3.25 to $3.50. There is considerable extracted honey on the market with scarcely any demand. Price nominal at 5½@6½c per pound. Beeswax in demand at 25@30c. C. C. CLEMONS & CO.

ALBANY, N. Y., July 6.—Honey very quiet, but some call for new comb, which would sell for 15@16c for light, now. Extracted dull at 5½@6½c. Beeswax, 30@32c. H. R. WRIGHT.

CINCINNATI, June 1.—Very little change in market from last report. We quote amber extracted grades at 5½@6½c in barrels; white clover, 8@9c; supply equal to demand. Comb honey, 15@16c for fancy. Beeswax, 30c. THE FRED W. MUTH CO

NEW YORK, July 8.—Some new crop comb honey now arriving from Florida and the South, and fancy stock is in fair demand at 14c per pound, and 12@13c for No. 1, with no demand whatever for dark grades.

The market on extracted honey is in a very unsettled condition, with prices ranging from 5@5½c for light amber, 5½@6½c for white. and the common Southern at from 50@55c per gallon. Beeswax steady at from 30@31c. HILDRETH & SEGELKEN.

CINCINNATI, July 7.—We have reached the time when there are no settled prices in the honey market. Everybody is waiting to learn how the new crop will turn out, therefore we will sell or ask the old price. Fancy water-white brings 15@16c. Extracted, amber, in barrels, 5¼@5½c; in cans, 6@6½c: white clover, 8@8½c. Beeswax, 30c. C. H. W. WEBER.

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Send sample and best price delivered here; also Fancy Comb wanted in no-drip cases.
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Nat'l Bee-Keepers' Convention at Los Angeles, Aug. 18-20

AMERICAN
BEE JOURNAL

43d Year. CHICAGO, ILL., JULY 23, 1903. No. 30.

Courtesy Bee-Keepers' Review.

Blanchard's Music Hall, Los Angeles, Calif.,
Where the National Bee-Keepers' Convention will be held, on Aug. 18-20.

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DR. C. C. MILLER, E. E. HASTY, EMMA M. WILSON

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2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

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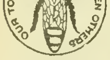
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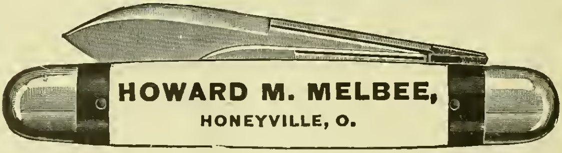

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AMERICAN

THE OLDEST BEE-PAPER IN AMERICA

BEE JOURNAL

43d YEAR. CHICAGO, ILL., JULY 23, 1903. No. 30.

Editorial Comments

Do Things on Time.—Promptness in doing everything at the right time is important in any calling; perhaps in none more so than in bee-keeping. The delay of a day in giving a super to a crowded colony may be the straw that decides the colony to swarm, materially interfering with the harvest.

A nucleus has its hive partly filled with frames. You fail to note its increasing strength till one day upon opening it you find a lot of crooked work. Comb has been built to the side of the frame and on the cover, and it takes you ten times as long to straighten it up as it would in the first place to have filled the hive with frames, to say nothing of the loss.

You are running short of sections in the harvest time. You thought you possibly had enough, and so kept postponing the matter of ordering till the last section was on the hive. Others have been like you, there has been a rush on the factory, so that it is behind orders, and the dealer can not possibly send you the sections without delay, and as a result you lose a part of your crop. The loss and the vexation might just as well have been avoided if you had sent your order early.

It is not necessary to cite further instances. Be on time, or ahead of time, and you will make more money, live longer, and be happier while you do live. If you're so built that you must be behind all the time, give up bee-keeping and go to shoving a wheelbarrow—you can shove better by being behind.

Getting Bees Out of Sections is a very simple thing with the white-clover flow that is now on in some places (July 4). All that is necessary is to take off the super—no need to drive out a single bee—after putting on the cover set the super on end on top, and leave it there till later in the day, when it will be found empty of bees. The bees will form a line of march down the side or front of the hive to the entrance, and after a little all will have joined the procession. If the sections be left thus exposed all day long, not a robber will touch them.

But wo betide you, oh inexperienced beginner! if you get it into your head that this is to be the unvarying program each year. Next year the flow may not be so good, and a very little exposure may start such a bad case of robbing that you will wish you had never seen a bee. Even in the best of years there will come a time when there will be a let-up in the flow, and then the least exposure must be avoided. So keep a sharp eye on your sections, and if at any time you see a bee flying with its head toward the sections, get them under protection immediately.

Feeding and Caressing of Queens.—In an article in the Bee-Keepers' Review, in which he pleads for fresh investigations on different points, Arthur C. Miller says:

> But what can you expect of others when you write of "bees caressing the queen and offering her food when she pokes her tongue from the partly opened cell." That surely is a relic of the dark ages. The tongue is probably put out as a "feeler," for it is often used thus. Bees never offer food to the queen, or to each other, it always has to be asked for, and, sometimes, almost taken by force. From long observation I am satisfied that it is never given on or by the tongue of the "giver," but is taken from the mouth of the "giver" by the tongue of the taker.

Mr. Miller has given evidence that his observations are entitled to consideration, but in the present case it need not be wondered at that some hesitation will be shown as to believing that bees never caress nor offer food to a queen. When bees are seen stroking and apparently dressing a queen, it is hard to believe that it is not meant somewhat in the nature of a caress. The tongue may be put out, as he says, as a feeler, but a feeler after what? Why not a feeler after food? If bees never offer food to a queen, and, as he says, it has always to be asked for, does not the queen ask for it by thrusting out the tongue? and if so when out of the cell, why not when in the cell?

Brood for a Nucleus With a Virgin Queen.—The practice of many is to give a frame with eggs and young brood to a nucleus having a virgin queen. This for more than one reason. If the young queen is lost, the bees will show the loss by starting a number of queen-cells. If no queen-cells are started it is safe to say a young queen is present, no matter if the most careful search fails to discover her. It is possible, however, that one or a few cells may be started even when a young queen is present, the cells not being destroyed till near maturity.

Behavior of Queens at Different Ages.—When a young queen has just emerged from the cell she is easily found, making no attempt to get out of the way. When a little older, a virgin queen is shy, scurrying with great rapidity from one part of the hive or comb to another, and makes such a success of hiding that the novice may be persuaded there is no queen in the hive. When about to assume the duties of egg-laying, she again becomes moderate in her movements, continuing thus through life, and in many cases continues depositing eggs in the cells when the comb is taken from the hive.

The Scarcity of Basswood is constantly becoming more pronounced. Lately in a private conversation a well-informed supply manufacturer said that the increasing difficulty of securing basswood lumber, and the constant advance in the price of the same was becoming a very serious matter. The amount used for sections is comparatively small, and if not a section were made, the great quantity used for so many other purposes would in not a great while use up the supply. He suggested the possibility that in the not very distant future it might become necessary to abandon the production of section honey, allowing extracted honey to take its place.

Such a result is not likely to occur. There is a demand for section honey that is separate from the demand for extracted honey, and consumers who prefer section honey are willing to pay several cents a pound more for the appearance, or whatever you may be pleased to call it. If basswood lumber should cost five times as much as it does now, it would not increase the cost of a section more than a cent, and the advance of a cent in the price of section honey would by no means kill the demand.

But even if basswood should entirely disappear, there would still be left the possibility of four-piece sections from any one of several different woods, some of them better in appearance than basswood. And it is just within the range of possibilities that the time may come when some will choose four-piece sections rather than to pay the increased price of one-piece sections made from basswood.

Association Notes

Exhibits of Bee-Supplies at the coming Los Angeles convention is called for by a reader in San Bernardino Co., Calif. He thinks it would be a good idea to have the manufacturers bring samples of their hives, etc., so that bee-keepers can compare them.

That Car-Load of Bee-Keepers for the Los Angeles convention expects to leave Chicago on Wednesday evening, Aug. 14. Will those who expect to be in that company please let us know by Aug. 1, if possible, so that we can make all arrangements here with the railroad company, such as securing berths, and anything else that may be necessary to arrange for in advance? Of course, if it is impossible to let us know as early as Aug. 1, do so as soon as possible after that date. We want to have as many bee-keepers from the East to start in that special car as can possibly arrange to be here at the time mentioned. The round-trip fare from Chicago to Los Angeles is $50; the berth $6; and the trip to the Grand Canyon, where it is expected to spend Sunday, is $6.50 more. By all going in one car the railroad company will allow the bee-keepers to take the same car to the Grand Canyon and sleep in it, and then afterward go on in it to Los Angeles.

In case any bee-keepers east of Chicago should purchase round-trip tickets, be sure to get them over the Santa Fe road from Chicago, as that is the route over which the car-load of bee-keepers will go.

We wish that 40 or 50 bee-keepers near Chicago and east of here could arrange to go in that special car. We would then have a continuous convention for several days. It will be a great trip.

Amendments to the National's Constitution.—The following amendments to the Constitution of the National Bee-Keepers' Association have been approved by a majority of the Board of Directors and of the Executive Committee, but in advance of laying them before the coming convention at Los Angeles, it is desired that all shall have an opportunity to criticise and suggest, hence their publication. Suggestions and criticisms may be sent to Pres. W. Z. Hutchinson, of Flint, Mich., who will lay them before the committee having the matter in charge:

ARTICLE III.—Membership.

Section 1 to be amended to read as follows:

Sec. 1.—Any person who is interested in bee-culture, and in accord with the purpose and aim of this Association, may become a member by the payment of $1.00 annually to the General Manager or Secretary; and said membership shall expire at the end of one year from the time of said payment, except as provided in Section 10 of Article V of this Constitution. No member who is in arrears for dues, as shown by the books of the General Manager, shall be eligible to any office in this Association; if such disqualification occur during the term of any officer, the office shall at once become vacant.

Section 2 to be amended to read as follows:

Sec. 2.—Whenever a local bee-keepers' association shall decide to unite with this Association as a body, it will be received upon payment by the local Secretary of 50 cents per member per annum.

ARTICLE IV.—Officers.

Section 1 to be amended to read as follows:

Sec. 1.—The officers of this Association shall be a General Manager, a President, a Vice-President, a Secretary, whose terms of office shall be for one year, and a board of twelve Directors, whose term of office shall be four years, or until their successors shall be elected.

Section 3 to be amended to read as follows:

Sec. 3.—The President, Vice-President, Secretary, and General Manager shall be elected by ballot during the month of December of each year, by a plurality vote of the members, and assume the duties of their respective offices on the first of January succeeding their election.

Section 4 to be amended to read as follows:

Sec. 4—The President, Vice-President, Secretary, and General Manager, shall constitute the Executive Committee.

Section 5 to be amended to read as follows:

Sec. 5.—The Directors to succeed the three whose term of office expires each year shall be elected by ballot during the month of December of each year by a plurality vote of the members. The three candidates receiving the greatest number of votes shall be elected and assume the duties of their office on the first of January succeeding their election. The Board of Directors shall prescribe how all votes of the members shall be taken, and said Board may also prescribe equitable rules and regulations governing nominations for the several offices.

Article V, Section 3, to be amended to read as follows:

Sec. 3.—Secretary—It shall be the duty of the Secretary to keep a record of the proceedings of the annual meeting; to receive membership fees; give a receipt for the same, and turn all moneys received over to the treasurer of the Association, together with the names and post-office addresses of those who become members; to make an annual report of all moneys received and paid over by him, which report shall be published with the annual report of the General Manager; and to perform such other duties as may be required of him by the Association; and he shall receive such sum for his services as may be granted him by the Directors.

ARTICLE VII.—Vacancies.

Amend by adding the following clause to the end thereof:

Any resignation of a member of the Board of Directors shall be tendered to the Executive Committee; any resignation of a member of the Executive Committee shall be tendered to the Board of Directors.

ARTICLE IX.—Amendments.

This Constitution may be amended by a majority vote of all the members voting, providing such proposed amendment has been approved by a majority vote of the members present at the last annual meeting of the Association, and copies of the proposed amendment, printed or written, shall have been mailed to each member at least 45 days before the annual election.

General Manager N. E. France reports the following, which will be of interest to bee-keepers generally, but especially to the members of the National Bee-Keepers' Association:

Riverside, Calif., has an ordinance, now enforced, forbidding the keeping of bees in certain parts of the city. Mr. France has written the authorities and bee-keepers there concerning the matter.

Another case is in a Michigan city where the ordinance is to take effect Nov. 1. Mr. Hutchinson has promised to wait on the officials of the city, and if possible make settlement.

There are several other localities in trouble, all of which Mr. France is helping. He is kept very busy in the work of the Association, and is doing lots of good.

Mrs. C. M. Gray, of Los Angeles Co., Calif., writing us July 4, had this to say:

We have had rather too cool weather until this month, but bees are now working in earnest on wild buckwheat, sage, etc., and we hope to have good results in extracted honey.

Southern California looks forward to a grand meeting of the American bee-keepers next month, and from all reports they will be tendered a royal welcome by those in and out of the fraternity.

Mrs. C. M. Gray.

Miscellaneous Items

Dr. F. L. Peiro can now be found at Room 13, 52 Dearborn St., Chicago; hours, 10 to 3. He wrote July 2: "White mulberries coming on. Bees rejoicing."

G. M. Doolittle, of Onondaga Co., N. Y., writing us July 10, said:

"Fearfully hot here. Bees doing very little. No basswood bloom this year on account of late frost. Thousands of acres of buckwheat sown, so we may get surplus later."

Bee-Sting Remedy.—"There is no better remedy for a bee-sting than the juice of roasted onion. Roast the onion in the ashes if possible and squeeze the juice out, hot as can be borne, on the affected part. This simple remedy, applied in time, has been known to save life." So says a newspaper item.

He Hurt Himself.—Little Byron, 3 years old, came in from his play crying and holding his foot.

"What is the matter with my boy?" asked his mother.

"I hurt me on a bee," replied Byron.

Those Strawberries, mentioned on page 420, have called out the following explanation:

Mr. Editor:—Your remarks about strawberries from here make me feel as if sailing under false colors, for the majority of readers might understand that the fine berries you speak of were raised by myself. The only part I have in their production lies in the fact that they are raised on my ground. Years ago I produced strawberries by the acre, but I never could produce such berries as those I sent you. That remained for my good brother-in-law, Ghordis Stull, who is a genius in that direction, and seems to impart to his strawberries the ambition to excel in size and quality anything previously accomplished.

C. C. Miller.

Convention Proceedings

Chicago-Northwestern Convention.

Report of the Chicago-Northwestern Bee-Keepers' Convention, held in Chicago, Dec. 3 and 4, 1902.

BY OUR OWN SHORTHAND REPORTER.

(Continued from page 453.)

FEEDING BACK TO PRODUCE COMB HONEY.

Mr. Craven—I would like to find out if any of the members of this Association, or any of the members of the National, who know and go to the National, have ever come across any other expert besides Prof. Eaton, who found the feeding back of cane-sugar for the whole apiary for the manufacture of honey, and whether it is profitable to do so to the men who do it. I have read, I believe, somewhere, that feeding back would take up, on an average, of about one-third or two-thirds less, and in that case if they should go to feeding back that would be at a loss instead of at a profit.

Mr. Hutchinson—It wouldn't make any difference whether sugar or honey, but whether it will be profitable or not you have to have the right kind of bees and management. I don't know whether any bee-keeper would make a success of it.

Mr. Moore—It may be that some one doesn't understand what a serious matter this is. I have told grocers and others that some bee-keepers are not too good to do anything if it will pay, but that there is a loss in feeding back honey, and I explained this very thing. I didn't mention his name. That they had tried all that was legitimate, and that it failed, that it could not be on the question, "Can you make dollars out of it?" So I say it can't be done. If anybody has a reason to show that I have been telling stories all these years, I want to know it.

Mr. Abbott—The strongest evidence that it can't be made to pay is, that it is not done, because there are, without a doubt, people in the world in some shape to do anything. Now, when honey is bringing the price it is now, if this thing could be done at a profit in a warm room some fellow would be doing it, and Prof. Eaton wouldn't say they had found a single case in the great honey market like this. Now, we have just heard of one case. I knew a man who undertook it once, but the bees raised such a muss with him that he put right out-of-doors; it raised trouble with him and his neighbors, and when he got through he was out of his sugar and didn't have anything to do with it. The fact is, that they do not do it. As I said this morning, they are scouring the country to get honey—that's the clincher.

Mr. Niver—I asked Morton why we had so many unfinished sections, and couldn't get them finished. We have so many. Why not feed back extracted honey and get them finished? He said, "I have had my experience; you try it." I selected fine colonies, and fed back 30 pounds of good extracted honey. I got three pounds back. That was my experience; I never tried it since.

Pres. York—That's almost 16 to 1!

BEE-WAY AND PLAIN SECTIONS.

"Discuss relative merits of, first, bee-way sections; second, half bee-way sections; and third, plain sections."

Mr. Pettit—I asked the question myself, and you have not interpreted it as I intended. What I mean by bee-way is, a quarter inch projection on two sides of the section; and a half way would be an eighth projection—the plain.

Dr. Miller—Perhaps Mr. Pettit will tell us about some experiments he may have made.

Mr. Pettit—With reference to the sections, I haven't had very much experience with any except the first-mentioned, those with the quarter-inch bee-way; but in my experience with them, and seeing how the honey is built out against the side of the section, I would be very much afraid of leakage from the plain section, and for general appearance I would prefer the section with the half bee-way. We have samples there that Mr. Niver showed me this morning.

Pres. York—How many use plain sections? Ten.

FORCED OR SHAKEN SWARMS.

"Forced or shaken swarms—what should be done with the combs of brood?"

Mr. Horstmann—Pile them up as high as you can, and make good colonies of them.

Dr. Miller—That's one good way. I should say it would depend upon circumstances. If you have a lot of nuclei, take that first, and when you have no other use to make of them then pile them up. That is all right.

Mr. Wheeler—What about robbing?

Dr. Miller—That depends upon what you expect. You have reference to leaving the brood without any bees? I should not advise that. I know there are some that do that way, though. Some say, take all the bees off and hatch the brood; either make a pile or a single hive full of the brood and give it a queen-cell or queen, and then depend upon the young bees helping out to take care of the brood that is there. I should expect, in a good many cases, to have robbing going on. If there is a bountiful harvest there may not be any. The one thing I would expect, there would be some chilled brood, even if they have weather so hot that the brood will hatch out day and night. There will then be some starved brood. There will not be bees enough there within the first 24 hours to feed the brood that ought to be fed, and I think you would pretty surely have some starved brood; so those two things would make it unadvisable to use that brood without any queen. These men don't look into the matter closely enough. They would find that they had chilled brood, or starved brood.

Mr. Baldridge—I am acquainted with the person who prepared that question. I wish to answer my way. I don't believe it is policy to shake off all the bees, but to leave enough to take care of the brood properly; but I should place these shaken frames of brood in an empty hive by the side of the parent hive. I would close the entrance entirely so that no bee can get in or out, and attach to the front end of the hive a bee-escape, so that when the bees went out to work they would be excluded from the hive, and in the course of three weeks all the brood will be hatched, the majority of the bees will be in the other hive by the side of it. I should place this hive no more than one, or two or three inches away from the old stand, so that the bees will be excluded, and secured in the other hive.

Mr. Horstmann—This question of shaken swarms is done for two purposes. One purpose to cut down foul brood. Another purpose to get good, clean combs so you will have good, clean comb honey, and I think it is a mistake to shake frames too much. I give them one shake, and leave plenty of bees on that comb to take care of any brood they may hatch out. If you close up the bees as Mr. Baldridge says, and put the bee-escape on, they will go somewhere. There will be a great deal of trouble, I think. Leave it open so they can get in, but leave it smaller, and then by shaking off four or five colonies at one time you will have a splendid colony from the combs that you have piled on top of each. There will be a new colony, and that colony will give you plenty of honey if there is any flow at all, and you will not lose anything except the old comb; and if there is any foul brood in the neighborhood it will get rid of that. This is one thing I was expecting would come up. Foul brood can be cured sometimes by giving bees clean combs. I may be a little off of the subject. I had foul brood in one colony. I didn't know it at the time. I placed a hive under it, and let the bees build down, and after they got to work in the lower story I took the upper story off and put on some brood-chambers, and I found out that that colony was cured of foul brood simply by the bees storing in clean comb. It was all done over two years ago, and there is no foul brood there now. Foul brood was cured by letting them work in the new part of the hive and storing clean honey, and using that for brood when the queen went below. Shaken swarms are good for that one thing, and I don't think people should shake too many bees off of the frames. We have to look out for foul brood; the most of the bee-keepers in this convention belong around here, and I always think I should talk more to the interest of those near home. The others, of course, know their business better than we do here, and we know what we need.

Dr. Miller—Let me suggest one other variation. Take the plan Mr. Horstmann suggests, make a pile, shake, if you please, all of the bees off, shake what is convenient to shake off, depending upon the character of the bees—you may get all off, or not entirely all; make your pile of brood upon some weak colony. In that case the brood will be fed, and there will not be the loss from starvation. Another reason, the other bees are not more likely to rob that pile than they are to have robbed the weak colony that was there before. If a new boy comes to school he has to run the gauntlet until he gets settled down. If there is a change made in the apiary, and there is any tendency to rob a colony, place it in a new place and it will be robbed. That's the case in my locality.

Mr. Horstmann—Did you ever have robbing during a good honey-flow?

Dr. Miller—I don't know.

Mr. Horstmann—I think it is very seldom.

Dr. Miller—I don't believe I did in a good honey-flow. I have had it in a honey-flow, though. You set a colony in a new place and the bees will try that, and if you pile this pile of brood upon a weak colony that has had its place there, they will not try it.

Mr. Wheeler—I have had quite a little experience along that line. I have been practicing that shaking process for more than ten years, and I find that even in a good honey-flow, honey coming in one day, we might have rain that night, and the next day the robbers would be out.

Dr. Miller—Still, that would be hardly called in a good honey-flow at that time.

Mr. Wheeler—My plan is to shake all the bees off, for fear you don't get the queen. If you don't get the queen it is too bad. You have to have the queen. After the bees are all off, I take the combs and hive and put them right where the old hive stood. I shake my bees all to one side, young bees and queen; I put the old comb on the old stand; the workers come in from the field and they take care of that comb. At night I carry that hive of old bees off anywhere I please. It takes from 28 to 48 hours for the old bees to go back to their old home where the hive is, and by that time there is brood enough in the hive to take care of itself.

Dr. Miller—Mr. Wheeler has a very bright way.

Mr. Abbott—Since I got to be a farmer I can't read everything on earth. I kind of got behind the Chicago swarm business. I supposed it was to get rid of swarming, but Mr. Horstmann says it is to get clean combs. When the bees are healthy, and there is no disease in a colony, does it ever pay to melt up a comb? I had an impression that a comb once made was worth more money as a comb. I have used combs for extracting that were 10, 12, and 15 years old. I don't know whether I got good honey or not. I always got the premium and 20 cents a pound for it. It seems to me if it is worth while to buy foundation, if one didn't want them, and there was no disease connected with them, they would sell for more as combs than they would in any other way. Maybe I misunderstood.

Dr. Miller—You haven't been reading!

Mr. Horstmann—I am going to experiment. One reason is to get rid of foul brood.

Mr. Abbott—Let me ask this question: Then you didn't mean to say that you destroyed the combs if your bees didn't have foul brood?

Mr. Horstmann—No. They are very handy to use for extracting honey.

Mr. Baldridge—The object of that question was not only to know what to do with the brood, but to secure all the bees in that hive, in the working hive. My plan secures all the bees in the original hive to store honey.

Mr. Wheeler—Doesn't mine?

Mr. Baldridge—I didn't say it didn't. No moth-miller can get in if the escape is on, or no robbers. You secure every bee in that hive without the loss of one on the original stand, on the parent stand working in the supers.

Dr. Miller—I think Mr. Wheeler's plan is taking a mean advantage of the bees. He takes everything away and sets empty comb in an empty hive, and the flight bees come back and occupy that, and they take care of them, and then he puts them on another place and they come out and go back to that same location again and join the swarm. I would like that you all get that idea of the two shifts that he makes, because these field-bees will hold to that one spot.

Mr. Niver—Do you all forget Doolittle's plan that he got up ten years ago? He made three swarms out of two normal colonies and a nucleus. There are certain things necessary to that plan. You must have as many nuclei as swarms, and, next, you must know within 10 days when the honey-flow will start. If you have ordered up your honey-flow and it gets there, and is delivered on time, you are all right; and if not, you are all wrong. We have tried that, because we can tell pretty near in New York State when our honey-flow is coming on, it varies but little. If it is bad weather, and the blossoms don't come, we have to feed. To make these swarms that way is a ticklish piece of business to understand. I think I talked a day and a half to Dr. Nussle to make him see it. Mr. Doolittle proceeds as follows, as told in his "Scientific Queen-Rearing:"

SWARMING.

After trying all the plans of non-swarming hives given, with no success, I settled down to the conclusion that such a thing did not exist when working for comb honey, and, even if it did, I doubt if as large a yield of honey could be obtained as by the use of swarming hives. Then, if we are to use swarming hives, the question coming next is, shall we make our swarms by dividing, or by letting them swarm naturally? Lately I have used both ways with what seemed to me the best results. It will be seen that our bees are all in readiness 15 days before the height of the white clover harvest, and where this is the main dependence for honey, all swarming should be done within the next five days. In this case swarming would have to be done largely by division, but as basswood is my main honey crop, coming about July 5, I do not practice artificial swarming, only so far as is necessary to have all swarming done 10 days before basswood opens. All swarms issuing previous to 15 days before basswood are hived singly in hives containing frames of empty comb, and a week from the time of hiving, boxes are put on in the same manner as described before. Those issuing, the next five days, are hived two swarms in a hive, when convenient to do so, and the full complement of boxes put on at once. If not convenient, the swarm, after being hived, is set on the stand of another colony which has not swarmed, and such colony changed to a new location, thus securing to the swarm all the field-bees from the colony moved. Each swarm thus made has given them a hive full of empty combs, and the boxes are put on at once. Thus, it will be seen all the swarms are in splendid condition to take advantage of the basswood harvest as soon as it commences.

Where I have two swarms together, the queen belonging to one parent colony is allowed to go back, when such hive is moved to a new location and the double swarm set in its place. The colonies losing their queens by their going with the swarms are allowed to rear their own queens, for (after thoroughly trying the plan) giving each colony a laying queen immediately after swarming, has not proved a success with me.

Eight days after a swarm has issued from a hive I open it, and, having ascertained that a queen has emerged from the cell, by finding one open at the end, I cut off all the rest and thus stop all second swarming. These cells, thus cut off, are placed in nucleus hives, if I wish more queens. By waiting until the first queen is hatched, I have a certain thing when the cells are all off, which is not the case where all but one cell is taken away four or five days after swarming; for the bees will often rear queens from the larvæ still in the hive at that time, and also the cell thus left will often fail to hatch.

When I think basswood will open in about 10 days, I proceed to make colonies from all the rest which have not swarmed, as follows: A hive is filled with frames of empty combs and placed upon the stand of one of these colonies which has not swarmed, and all the boxes are taken off and placed thereon, then all the bees are shaken and brushed off their combs of brood and honey in front of this prepared hive into which they will run as fast as shaken off. Thus, I have a colony that is ready for the honey harvest, as they have the queen, bees, and partly-filled boxes all in readiness for work. Previous to this, nuclei have been started, so that I have plenty of laying queens to use as I need them.

I next take all the combs of brood from which the bees were brushed except one, arranging them in the hive the bees were shaken out of, and carry them to the stand of another colony which has not swarmed. Next I take the comb of brood which was left out, and go to one of the nuclei, taking out the frame having the laying queen on it, and place the comb of brood in its place. Take the frame, bees, queen, and all and set it in the place left vacant for it when arranging the combs of brood. Now put on the boxes, and having all complete, I move the colony to a new stand, and set the prepared hive in its place. Thus, I have a laying queen and enough of her own bees to protect her, together with a hive filled with combs of brood and all the field-bees from the removed colony. In a very few days the colonies are ready for the boxes, and generally make the best colonies I have for storing honey. The loss of bees to the removed colony stops the swarming impulse, and in about a week they have so regained their loss that they are ready for the boxes again.

It will be seen my aim has been, in using these several plans, to get all my colonies strong enough to work in the boxes (during the best harvest) to advantage, and still have none of them desire to swarm during the height of the best flow of honey. By adopting a plan called "nucleus swarming," I once had my bees (after an early division) nearly all swarming in the height of the honey harvest, by which I lost at least $500; for swarm they would in spite of all I could do, and, while the swarming fever is on but little work will be done in the sections, as all apiarists know. This taught me a lesson; I hope to profit by all such lessons, else why the use of learning them?

That's the old Doolittle plan. As I said, it works finely, providing your "goods" are delivered that you order—a good honey-flow in ten days.

Dr. Miller—I think you will find pretty nearly the same thing in the American Bee Journal of 1861.

Dr. Nussle—I have a good many journals, but not that one.

Mr. Niver—I found that in the American Bee-Keeper; I think it was at least 10 years ago, and perhaps older.

(Continued next week.)

Contributed Articles

Shaken Swarms, or Anticipating Natural Swarming.

BY DR. C. C. MILLER.

THERE are very varying views as to this matter. Some are very enthusiastic about it. Others find in it little to commend. It seems to me it is nothing more or less than anticipating natural swarming, and when the comparison is made between the two there are for some, if not for most, advantages in the shaking plan not to be ignored. The advantage of being able to have the swarms made at a time to suit the convenience of the bee-keeper rather than the whim of the bees, is enough to settle the case with very many.

But although I have practiced it more or less for years, I have not been as enthusiastic about it as some are, because I have indulged the hope that some plan might be discovered by which all swarming might be avoided, both natural and forced. One year after another I have had colonies that made no offer to swarm, and my record yields have always been from such colonies. I have made some attempt to encourage non-swarming by breeding from these colonies that devoted their time to storing rather than swarming, and not entirely without success. Yet I am sorry to say that this year the bees have seemed to forget all about their lineage, and preparations for swarming have been nearly universal. I don't know why.

Having such an antipathy to swarming, I can sympathize with my esteemed friend, Adrian Getaz, in some of his objections to forced swarming. Yet upon reading his article on page 407, I can not repress a feeling of interest for the under dog in the fight, and so will make some attempt at defense against some of his charges. Besides, the matter is of so much general interest that there is warrant for occupying room to have it fully viewed from all sides.

It is true that with forced swarming there must be a number of extra hives, but no more than would be necessary for natural swarming. Indeed, it is necessary only to have an extra-body for most of the colonies, for the shaken combs of four, five or six colonies can be piled in one pile, a single cover and bottom-board doing the service for the pile.

Mr. Getaz varied from the usual practice by returning the brood at the end of five or six days, and it was a success in preventing swarming. That's more favorable to shaken swarms, I am afraid, than results in general would warrant. I don't know that I ever tried—I think I never did try—exactly that plan, but I should expect my bees, in most cases, to swarm on return of the brood so soon. But I should expect them to work in the brood-chamber, just as his did. Ordinarily I think the brood is not returned at all, and if empty combs are given in the brood-chamber the work in the supers ceases and the combs in the brood-chamber are filled. But there is no real loss in this, for as fast as the queen needs the room for eggs, the honey is emptied out of the brood apartment into the super.

The queen will be likely to go into the sections just as she would with a natural swarm, but if combs are given in the brood-chamber she will not. Combs in the brood-chamber will also prevent pollen in the sections.

An inspection every fourth or fifth day is necessary, Mr. Getaz thinks, in order to anticipate natural swarming. I get along pretty well with an inspection every nine days.

Mr. Getaz thinks emphatically that drawn combs should not be given in the brood-chamber, because the bees will fill them with honey at once, and he prefers comb foundation. If the brood is to be returned in five or six days, no doubt foundation is best, but if there is to be no returning of brood, drawn combs work nicely. It is true that they will be filled with honey, but, as I have already said, the honey will afterward be emptied out into the sections. So I have no trouble in giving the full quota of drawn combs at the start.

I am with you, Mr. Getaz, in much preferring to keep the force of bees together, but I get into lots of trouble trying to do so, and I think we must admit that as between natural and forced swarms there is for most a decided advantage in the forced.

You say there is a double loss with shaken swarms: "The parent colony loses the bees that are on the new stand; besides that, it has to rebuild its brood-nest." But the practice of many is to shake the bees back, or to make a double shake, once in ten days and again at the end of 21 days from the time the swarm was made. In that way nearly all the full force is kept in the hive.

Your plan of returning swarms, and killing the old queens and letting the bees rear young queens wouldn't suit some, especially those with out-apiaries not visited every day. Even if I had only the home apiary, I would rather not have young queens reared in the hive at harvest time. Too often the bees swarm out with the young queen.

I have fought hard against all swarming, natural or forced, but it is quite possible that I may never succeed to entire satisfaction in preventing swarming.

McHenry Co., Ill.

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Drones—Do They Keep the Hive Warm?

BY C. P. DADANT.

I NOTICE that Mr. Hasty criticizes my position on the drone question (page 345). He says: "It is not quite *always* that we can have the warming presence of the drones answered by the workers just as well. The first night after swarming finds workers reared in the drones' place mostly all gone, while most of the drones are where they are needed." Then he added: "Will 50,000 bees in the flush of the season feel quite satisfied in their own minds if no drones are among them?"

There are no rules without exception, and I will grant that *if* a swarm happens to issue on a certain day, and the weather changes suddenly that same day from hot to cool, the drones, if they have not gone in part with the swarms, may prove a little help for a night. After the first night there are enough young bees hatched out to keep up all necessary heat.

But swarms rarely issue when the weather is cool, or when there are sudden atmospheric changes. Swarms are usually cast when the weather is hot and likely to remain hot. Drones pay no attention to the brood. They prefer to stay on the honey, so as to be able to help themselves without moving.

A colony which has cast a swarm has usually a sufficient number of worker-bees in the field at the time the swarm issues to keep the combs warm—the brood-combs at least—in a cool night, for those bees are all back to the hive for the night, though they were away when the swarm went off. Those drones not only do not care to keep the brood warm, but they do not care where they are, so they are warm themselves, and they are usually nested away in the upper part of the combs if the weather is cool. Then please bear in mind, it will bear repeating, that those drones have all been reared at a time when the hive needed warmth to keep its brood warm, when it took valuable worker-bees to nurse and hatch all the brood.

Mr. Hasty thinks the bees will be satisfied in their own minds if there are no drones among them in the flush of the season. Well, I believe he is right, but I never have been able to keep a colony from rearing any drones at all. Only if we can keep the breeding of these drones down to a few hundred instead of a few thousand, I think we will have achieved a great saving, and will also have helped prevent the most promiscuous swarming, for I have repeatedly observed that the colonies which were allowed to rear the greatest number of drones were the ones which swarmed the most.

To me, natural swarming is a hindrance to success. I want to control it, and do in a great measure. If we want increase we can always make it artificially from choice queens and from colonies which would produce so little surplus that it is all gain to make the increase from them. In order to do this we must ascertain the best methods to avoid natural swarming, and the prevention of drone-rearing is one of the requisites.

But there will always be in any hive a few drone-cells—a corner, here and there, where the bees will find place for a few large cells, and there will be drones enough reared to let the bees know that they are there, for they are so noisy and clumsy that I imagine they are only *tolerated*, most of the time, just like a lot of noisy children in a busy place.

What I hold and want to impress on the beginner who reads the American Bee Journal is the advisability, in a state of domestication, to regulate the production of drones by removing the drone-comb and replacing it with worker-comb, just as much as possible, in every hive from which we do not particularly care to get reproducers. I hold that in a state of absolute freedom, each colony of bees is induced by Nature to rear a large number of drones for the sake of the young queen that must meet one in her wedding-flight. In a state of domestication, when we congregate 50 colonies in one location, it is our place to regulate this over-production of drones, for it becomes an overproduction when we gather the colonies in one spot, the drones of one or two colonies being amply sufficient to mate with the 50 young queens that may be reared.

In a state of entire freedom a colony of bees will not continue to store honey away till it amounts to tons. It will rear drones enough to eat its surplus, *at some time or other*. This in a general way. A colony that is ill-supplied with honey will kill its drones much sooner than one that is rich in stores, or "fat," as the French call it. The rich colony will also rear drones much earlier in spring, and will thus use up its surplus. But our domestication of the bees will not be thorough if we do not learn to save on the breeding of drones, and cause our bees to produce only enough of them for the absolute needs of the apiary.

If drones had been intended at all for warmth, they would have been kept when the weather is cold in the spring. But the reverse is the case. Let there be a few weeks of warm weather early drones will be reared, then let a cold spell come when the brood needs care and warmth, and at that very time you will see the workers persecuting the drones, driving them out, mercilessly, one by one, to tolerate them again when the heat returns.

Hancock Co., Ill.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

A "Sister" to Help in the Apiary.

I keep a few bees, and would like to build up a fair-sized apiary, but as I am the miller I do not have the time to give them the proper attention. With the opportunity there is for selling the honey here at home, I think this would be a good location.

Do you think it would be advisable to try to secure the help of one of the bee-keeping sisters, or one who wishes to learn? She might help with office-work, and I could help with the bees. M. Dusty.

Washington Co., Pa.

Answer.—It might be a good plan. You can tell better after giving it a trial. Very much depends upon the person. If you can secure the assistance of some relative who will take a personal interest in the work you may find it very advantageous.

Bees Working on White Clover and Alfalfa.

I have kept bees for ten years. I do the work myself. I have 14 colonies now. White clover and alfalfa are in bloom, and bees are at work early and late.

Bokhara clover is seeding heavily this year.

Wabaunsee Co., Kan. Minnie Peet.

A Pennsylvania Sister's Experience.

I have been connected with bee-keeping for a number of years, and ought to know more about the business, but I have found that even what we "don't know" can be a help to others by starting investigation. To tell of my varied experiences in all these years would fill a volume. Successes and failures have followed all the way along. Losses have been in wintering. I have tried almost all ways. The most successful was under a part of our house not excavated as a cellar, but quite roomy and enclosed all around. It was such backaching work to get them under there, we gave it up for that reason.

My first venture, after having kept a few colonies, was to buy 25 colonies, giving a horse in exchange. I gained considerable experience in working with them. In 1896 my son and I bought an apiary of 42 colonies, hives and fixtures, all in excellent condition, of a widow whose husband was a bee-keeper. She did not want to have anything to do with the bees, and so we got them at a bargain. We had about three excellent honey-years, and did well. Now, there have been three off years, and natural increase has not equaled winter loss. After selling some this spring, finds me with only 15 colonies and a lot of empty hives.

My son has the farm work to do and can not help much about the bees. My husband has been an invalid for more than two years with a nerve trouble. He never took kindly to the bees. I enjoy them as much as ever, and would like to increase this summer without spoiling my honey crop, which has been a much-needed source of revenue to us.

I have taken the Bee Journal a number of years, and like the new department very much. I am looking for a queen for a new subscriber. I can not always spend as much time, and give close attention to the bees as I would like, owing to other duties. Mrs. D. W. Brown.

Erie Co., Pa., May 18.

Rearing Queens, Swarming, Etc.

My Dear Miss Wilson:—

I have 8 colonies of bees and wish to increase to 16, and Italianize. I want to buy a queen and rear young queens from her, but can't decide whether to get a "breeder" or "select tested." I am anxious to have the *very best* queens, and don't mind *any* trouble to produce them, but I am inexperienced, and am afraid I'll make some mistake, therefore I don't feel like paying a high price for a breeder when possibly a select tested would be almost as good, and less experience for one to "tinker" on.

1. Is there much difference between the two?

2. Now, I propose to put two stories of brood over a strong colony, confining the queen to the first floor. In eight or ten days take both upper stories with all the bees of each and place on a new stand, confining them for 24 hours, and give them young brood from my choice queen, and in nine or ten days break this colony up into nuclei. Will this method give me the *best* of queens? or would it be better to put both stories back over the excluder and queen after cells are started? I intend to put entrance-guards on hives containing black drones before my young queens take their flight. I am unable to watch my bees continually, as I have other work to do.

3. Will they store as much surplus if I use entrance-guards and queen and drone traps during the swarming season? My idea is to put an Alley queen and drone trap on the hive on which I find cells most advanced, so as to catch the queen and place among the cluster (also to prevent her getting lost, as she will be clipped). Then hive in a plain box and return to the parent colony next day. (The trap will be shifted to other colonies when needed.)

4. Is there much danger of such a colony swarming again? I forced one colony April 14 (finding advanced queen-cells), and it swarmed June 8 just the same.

5. If you had most of your hives to buy now, and were running for comb honey, which kind would you buy? I have a couple of Danz. hives, but I haven't tested them enough to know whether they are best or not. My other hives are for ten frames.

My bees have always wintered well, never having lost a colony, and they have had no extra attention, such as feeding, packing, etc., and wintered on the summer stands in quite an exposed position, too. I have read much about rearing bees six or eight weeks before the harvest, so I tried this spring by covering each hive with old rugs, paper, straw, etc., and turning a large dry goods box, in the bottom of which was straw held in by paper and small sticks, over each colony.

6. Do you suppose it did any good? or would it have been better to have had them so packed all the winter? My bees swarmed earlier this year than ever before. The first swarm issued April 8. I thought perhaps it was because of their being wrapped up, though a few weeks later other swarms in the neighborhood were reported. I am anxious to know what kind of "locality" this is for bees. I have never made it a study, but I am trying to do so now.

Fruit blooms here through March, commencing about the first; white clover from the first of May through June, sourwood the last of June. I don't know what will be next, but I intend to "look out;" nor do I know how *much* pasturage of any kind is accessible. White clover grows quite profusely along the roads and in the yards, but most of the land is under cultivation. There are acres of strawberries, but they bloom so early. I don't know whether they are of much value or not.

7. What color is strawberry honey?

Locust and holly bloom in May, but my bees did not notice the locust, though bumble-bees were lively around it, but mine were equally as—I was going to say, boisterous, but hardly—around the tiny little holly blossoms.

8. Do you suppose my bees did not notice the locust because of white clover and other preferred blooms?

I have killed numbers of those little pests—the bee-martins. I have an idea they have a special taste for virgin queens, since I've lost several. Spare them for the sake of keeping away hawks? not I. I prefer to use that same shot-gun on the hawks.

I take the Bee Journal and have Dr. Miller's new book, both of which I thoroughly enjoy, and don't feel that I can do without. My! when I get started on bees it's hard to stop. "So it seems," I hear everybody say.

Mrs. C. D. Mears.

Princess Anne Co., Va., May 26.

Answers.—1. Probably there is not much difference.

2. If all the combs are well covered with bees it will be all right, but be sure they have plenty of bees. Remember some of them will go back to the parent colony.

3. It will probably make very little difference.

4. Generally not, unless very early.

5. Most likely the eight or ten frame dovetailed.

6. The packing may have made some difference, but this has been an unusually early season in general.

7. I don't know, and I doubt if any one else knows.

8. Very likely.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Sumac as a Nectar-Yielder—Distance Bees Gather.

1. There is a bush that grows in this county known by the common name of sumac. It grows very abundantly in this section. There are two kinds of it, the red and the white. It is in bloom now, and the bees are working on it. It does not grow in the bottoms, but there is lots of it on the hills. What is the correct name for it?

2. Is there much honey in it? If so, is it of good quality?

3. My apiary is 1⅛ miles from the Red River bottom—a bottom about 8 miles wide, containing a very dense forest. It is about 5 miles to the river where there is a very extensive agricultural business carried on. I can see my bees going to the bottoms. How far do you think they will go in the bottoms?

Arkansas.

Answers.—1. Probably the plant is sumac.

2. I don't know anything about sumac honey.

3. Bees have been known to go as much as 7 miles, but probably not with profit more than 2 or 3.

A Swarm with Queen-Cells—White Clover Disappearing.

1. Five days ago I hived a moderately large swarm in a hive of usual size. The bees went right to work and have seemed perfectly contented from the first. Yesterday, five days after swarming, I opened the hive, found comb-building advancing nicely, some honey, and an abundance of eggs. The surprise that awaited me was the discovery of six queen-cells, all about half completed, and each containing an egg, or a larva with royal jelly. How do you account for queen-cells so soon after hiving?

2. Why does white clover disappear so completely after one year of luxuriant bloom? A vacant lot near my home last summer was a perfect snowbank of clover blossoms. The lot has not been plowed nor disturbed in any way whatever. But this summer it is impossible to discover a solitary clover plant. The entire lot has grown up to plantain. What is the reason for this?

Pennsylvania.

Answers.—1. Very likely most bee-keepers would be, like you, surprised to find queen-cells so soon after the hiving of a swarm. Yet I doubt its being anything so very unusual. Remember that when left to themselves the bees will supersede a queen when she becomes old enough, and that supersedure will generally take place toward the close of the honey harvest. The queen has been doing her heaviest laying up to the time of swarming, and why should supersedure not take place immediately after swarming as well as later?

2. I don't know. Perhaps it winter-killed. Who can give a better answer?

Two-Pound Sections—Coverless Colony Rained On.

1. A friend gave me some two-pound sections with supers. Are they all right for family use? I never saw any on the market and I can't remember ever seeing a two-pound cake of honey on the table.

2. The colony I started with this spring seemed good and strong, but during a heavy rain-storm the last of May the hive was uncovered. Would you think that the young brood would be chilled and thus destroyed by exposure? I found a few dead bees outside the next day. I put a super on during fruit-bloom, but they did nothing on it but filled it with bees. They are now storing some clover honey.

3. How would you remove a colony of bees from under the siding of a house?

4. I have found a bee-tree, and the owner of the tree objects to my cutting it. How would you get the bees out?

Subscriber.

Answers.—1. Yes, they are just as nice in every way as the smaller sections except as to matter of size. Formerly they were somewhat common on the market, but when the pound sections appeared the larger could only be sold at a lower price.

2. It is not likely that the brood was injured in the least. The bees pack themselves over it so as to make a "shingling" that will shed all rain from the brood. Still, it is not likely that a cold bath does the bees any great good.

3. Cut away the boarding so as to expose the combs, using the necessary smoke; cut out the combs and transfer them as directed in your book for transferring, arrange so as to have the hive close up where the bees were, and allow the bees all to settle on the combs, perhaps keeping the hive uncovered for that purpose. Toward the close of the day see that no bees have gone back to the old place, driving them out with smoke. When all have ceased flying in the evening, take the bees into a dark cellar and keep them there for two or three days, then set them on the stand where they are to remain.

4. Just what the law is with you I don't know, but if you do the work of taking down the tree and getting the honey you ought to be allowed at least half of it. The combs can be fastened in frames as in regular transferring. The work can be done almost any time during warm weather. If only the honey is to be secured, wait till the harvest is over.

Keeping Swarming Colonies Strong—Using Queen-Excluders.

I am a beginner in bee-keeping and a subscriber to the American Bee Journal. The questions and answers have been a great help to me, but there are one or two that I would like to ask that I don't believe I have ever seen printed.

In the fall of 1901 I bought a colony of black bees in an 8-frame Langstroth hive. They were strong, and wintered nicely, and the 14th of the next May sent out a large swarm. I hived them as soon as clover began to blossom.

1. How can they be kept strong when they are swarming all the time?

2. I am greatly interested in the business, and wish to run for comb honey. Is it well to have them swarm so much? (I want the honey more than the increase!) If it is not well to have them swarm so much, what can I do to prevent it?

3. Is it as well to have queen-excluding zinc over the brood-frames? If so, where can I get it, and what would be the price?

Maine.

Answers.—1. One way that is a good deal of trouble, although perhaps the surest way for one not very experienced, is to return each swarm that comes out. When a swarm issues take the cluster and dump it down in front of the hive from which it issued, letting the bees run back into their old hive. If you cannot cut off the limb on which they are clustered, hive them in a hive or box, and then empty them in front of the hive. As often as they swarm return the swarm, and about two weeks after the first swarm issues you will be done with all swarming of that colony for the season.

2. No, it's decidedly a bad thing to have much swarming, and if you do not care for increase it would be better not to have any; but it is hard to convince the bees that they ought to respect your wishes. An easier way to manage than the one given in the preceding answer can be followed if you want one swarm from each colony and want no after-swarms. When the prime swarm issues, hive it and place the hive on the old stand, putting the old colony close beside it. A week later take away the old colony and put it on a new stand at some distance, and there will be little danger of any more swarming. You see that removal at about the time the young queens will be hatching out will so deplete the colony by taking away their field-force that they will have little heart for further swarming.

3. If you are working for comb honey and have your sections *full* of worker foundation, there is no need of a queen-excluder. If working for extracted honey it is better to have the excluder. Queen-excluding honey-boards may be had of any dealer in bee-supplies, and cost from 15 to 22 cents each, according to the kind.

Getting the Foul Brood Inspector's Help.

How is the foul brood inspector's aid obtained to treat that disease. I think that my neighbor's bees have it, and he is like most farmer bee-keepers, very ignorant of the disease. It may mean much to my apiary if not gotten rid of.

ILLINOIS.

ANSWER.—I do not know of any foul brood law in Illinois that will prevent your neighbor from keeping diseased bees if he wants to; but if you will write to Mr. J. Q. Smith, Lincoln, Ill., the foul brood inspector appointed by the State Association, you can get all the help that is to be had.

Transferring, Forming Nuclei, Etc.

1. How many pounds of comb honey will it take to make one gallon of extracted?

2. Will the bees store enough honey in the lower story of the hive to last them all the winter?

3. Would the first of June be too late to transfer, or to form nucleus colonies?

4. Which would you think to be the best, to sell honey at home at 10 cents per pound, or ship it North and sell it for 15 cents per pound?

5. Do bees gather much honey from the blossom of the cottonwood tree?

6. Is it the best plan to rear queen-cells in nucleus colonies?

7. I have some brood-frames full of honey. Would it be a good plan to give it to my nucleus colonies?

8. I have some colonies that haven't swarmed this year. Do you think it is cold weather that is preventing them from doing so, or is it something else?

9. If you would make nucleus colonies now, do you think it would be a good plan to commence feeding them now, so they would have plenty of stores for winter?

10. How soon after a virgin queen is introduced into a colony will she begin laying?

11. How many nuclei can I form from a 10-frame colony having plenty of brood?

12. Is it necessary to have a queen or a ripe queen-cell to introduce into a nucles as soon as you form them, or can one wait a while?

MISSISSIPPI.

ANSWERS.—1. A good quality of extracted honey weighs something like 12 pounds to the gallon, and the difference in the weight of the wax is very little.

2. Yes, and no. If the hive is large enough, yes. If small enough, no. That's on general principles, but colonies differ, and some colonies in a very small hive will make sure of their winter's supply, while others will have the brood-chamber so fully occupied with brood till late in the season that there will be no room for stores.

3. Not at all.

4. I don't know. If it is comb honey, taking into account the chance of loss from breakage, besides freight and commission, perhaps the 10 cents in hand would be better.

5. I think not, if the cottonwood of Mississippi is like the cottonwood of Illinois.

6. I prefer to have them in strong colonies, at least until sealed.

7. Yes.

8. Not necessarily cold weather. I have colonies every year that make no attempt to swarm, and they are the very ones that give the largest crops.

9. It ought hardly to be necessary to feed unless there is a dearth.

10. That depends upon her age when introduced. She will generally begin laying when from 8 to 12 days old.

11. Probably about 4, for there will likely be about 8 frames of brood, and you will need 2 frames for each nucleus. If, however, you have two or more nuclei in one hive, so that they can have the advantage of mutual heat, and if your colony is very strong in bees, you may be able to make a nucleus for each frame of brood.

13. No, you can't suit your convenience in the matter, only it is a waste of time to have a nucleus long without a queen or cell.

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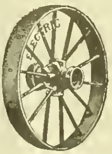

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H. LATHROP.

Green Co., Wis., July 6.

"Cheeky" People—Queenless Colony.

Everybody seems to think they can get along with the information they can pump out of another bee-keeper that is posted. So I have come to the conclusion that the best way to get rid of such parties is to charge for the information and see if it would have any effect. So the other day there was one came along. He had a swarm and no hive for it, and wanted me to show him how my hives were constructed, which I did. Well, he said there would be no use for him to undertake to make one, for he would make a complete failure of it, and he asked if I would make one for him. I said I would. So I put the swarm in a cracker-box and went to work on his hive and constructed an 8-frame body, frames with starters, one super complete with sections and starters; put the bees in, and

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charged him $2.50, and he thought it was outrageous and said he would not pay it. Well, if he doesn't I shall levy on the bees this fall. That is a specimen of some of the people I have to contend with, and there are lots of them around here.

A sure cure for a queenless colony: Shake all the bees off in front of the hive and run a swarm in with them. At the same time give them a frame of brood in all stages, and the work is done. In eight days take out all queen-cells but one, and you have as good a colony as you have in the yard.

My bees are doing well this year. I started with 24 colonies, spring count, and swarming is over now and I have 56, and all good and strong except one, which has a poor queen, and I shall introduce a queen.

I am working hard to keep up with the bees, but as this is the first rush I have ever had it keeps me guessing, as I have to do all the work and can't get sections at any price half the time.

I wonder what Yon Yonson is doing. I have not heard from him for some time. I was amused at the way he did with his golden Italians that would not work upstairs, as I had some that were that way. So I did the same as he did, divided them, and they are all right. I suppose that man that crossed his strawberries with milkweeds is having a fine time eating strawberries and cream.

By the way, I think that the best cross some of those big bee-men could make would be a cross with the golden Italian and the lightning-bug, so as to have a night force on in the busy season. Well, Yon Yonson, study over this and see what you think of it, and let us know. I am inclined to think that those big queen-breeders could do a big business if they could make a success at the cross.

J. M. BUTLER.

Mercer Co., Ill., July 10.

Big Swarming—Time to Read.

Prospects are good for a big honey crop here. I have had 100 percent swarming from 300 colonies. I have "shook" about 2/3, and am cutting cells out of the rest, as it is getting too late for shaking. Do you think I have been busy? I weigh only 120 pounds, and do nearly all my own work. I am not like the fellow that stopped taking the American Bee Journal because he didn't have time to read it. I read it and four more.

M. W. HARVEY.

Montrose Co., Colo., July 3.

Rearing Queens.

Now, I am going to use a little of that high pressure, smokeless powder (that we of the Pacific States believe in) at a few of those queen-breeders, while you have the pleasure of listening to those old-black-powder out-of-date things roar back at me. But that is all right. Let them roar. They will only get mixed up in their own smoke.

In the first place, please read over J. A. Green's article on page 197. Then read Mr. Alley's article, page 198, both in the issue of March 26. After reading those articles please bear in mind that Mr. Green's queenless colony became queenless at a time of year (according to my theory) when there would in no probability he a live bee in the colony reared from a fully-developed egg.

Now, then, before we go any further, it is just as well that I state my theory:

1st. A laying worker is a worker-bee that was fed and reared as a worker from a fully-developed egg, that on account of the queenless state of the colony is trying to set herself up for a queen, and at any time during the life of those bees after swarming-time a colony may possess them.

2nd. A worker-queen is a queen reared out of season at any time of year from an undeveloped egg, or the egg from any queen having plenty of empty combs in which to lay, and is not retarded in egg-laying. Such an egg will produce but two things. If fed as a worker it will produce a common worker, never a laying worker. Second, it will produce a worker-queen if all conditions are right for its development, but it will never produce a long-lived prolific queen proper.

3d. A queen proper is a queen reared from an egg that has been fully developed by the mother queen being crowded for room, and egg-laying retarded until the eggs are developed more than normal; or from an old queen in which the formation of eggs is ceasing, and, in consequence, they being fewer in number, are better developed, as in supersession.

Now, I have been reading between the lines for some time, and the only queen-breeder that seems to be conforming to Nature, or nearly so, is G. M. Doolittle, hence his oft-repeated advice to the beginner to rear a few queens about swarming-time. But, on the other hand, while trying to conform with Nature he doesn't admit of a difference in worker-eggs. Now, right here I want to ask Mr. Doolittle how he can account for *laying workers* at one time of year and not at other times. I have noticed that worker-bees produced during the swarming period are always better developed in every respect, and partake more of the form of the queen, than during the roomy period in a hive.

Now, don't thing that I argue against all the other good conditions necessary to produce a good queen, but I want one thing more, a fully-developed egg.

Let us take a peep into a hive of bees for the season and see what takes place, and we will see that Nature makes no mistakes. 1st' Nature begins by giving the bees pollen along with a little honey, and there being plenty of empty cells early in the spring, it is the desire of both queen and bees to fill them as soon as possible, consequently eggs are laid as fast as produced and are developed into worker-bees; now, dear reader, just make one of these colonies hopelessly queenless after all the bees from the full-house time of last year are dead, and see if you don't have the same experience as J. A. Green reported.

We will go a little further, and we find a hive full of bees, drones, honey and pollen, to such an extent that the queen can not lay one-half the eggs she desires, consequently the eggs are better developed, and Nature steps in and creates a desire of reproducing herself. Now, with such a desire, and under such circumstances, would it be anything out of the ordinary run of things if the queen, by some means or other, was to do something in depositing the egg in a cell-cup that would

FENCE! *STRONGEST MADE.* Bull Strong, Chicken-Tight. Sold to the Farmer at Wholesale Prices. Fully Warranted. Catalog Free.
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The AMERICAN INSTITUTE of PHRENOLOGY
Incorporated 1866. 39th Session opens Sept. 2d. Subjects: Phrenology, the Art of Character Reading; Anatomy, Physiology, Physiognomy, Heredity, Hygiene, etc. Address: 24 E. 22d St., New York, care of FOWLER & WELLS CO.
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QUEENS!

Golden and Leather-Colored Italian, warranted to give satisfaction—those are the kind reared by QUIRIN-THE-QUEEN-BREEDER. Our business was established in 1888. Our stock originated from the best and highest-priced long-tongued red clover breeders in the U. S. We rear as many, and perhaps more, queens than any other breeder in the North. Price of queens after July 1st: Large Select, 75c each; six for $4; Tested Stock, $1 each; six for $5; Selected Tested, $1.50 each; Breeders, $3 each. Two-frame Nuclei (no queen) $2 each. All Queens are warranted pure.

Special low price on queens in lots of 25 to 100.

All queens are mailed promptly, as we keep 300 to 500 on hand ready to mail.

We guarantee safe delivery to any State, Continental Island, or European Country. Our Circular will interest you; it's free.

Address all orders to

Quirin-the-Queen-Breeder
PARKERTOWN, OHIO.
(The above ad. will appear twice per month only.) 16E13t
Please mention Bee Journal when writing

REMARKABLE The Universal Satisfaction our QUEENS do give...

STERLING, GA., June 29, 1903.
I was showing my father yesterday how my bees, which I bought from you, were out-working everything in my apiary. Send me 4 Buckeye Red Clover and 2 Muth Strain Golden Italians. I will order more after next extracting. THOS. H. KINCADE.

Buckeye Strain Red Clover Queens. They roll in honey, while the ordinary starve.
Muth Strain Golden Italians—NONE SUPERIOR. ∴ **Carniolans**—NONE BETTER.

Untested, 75c each; 6 for....................$ 4.00 | Tested, $1.50 each; 6 for....................$ 7.25
Select Untested, $1.00 each; 6 for.......... 5.00 | Select Tested, $2.50 each; 6 for............ 12.00
Best money can buy, $3.50 each.

Send for Catalog of **BEE-SUPPLIES**; complete line at manufacturer's prices.

The Fred W. Muth Co.,
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We are the Largest Manufacturers of Bee-Keepers' Supplies in the Northwest
Send for catalog.
MINNESOTA BEE-KEEPERS' SUPPLY MANUFACTURING CO.
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We have the Best Goods, Lowest Prices, and Best Shipping Facilities.

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Retail and Wholesale.
This foundation is made by a process that produces the superior of any. It is the cleanest and purest. It has the brightest color and sweetest odor. It is the most transparent, because it has the thinnest base. It is tough and clear as crystal, and gives more sheets to the pound than any other make.
Working wax into Foundation for Cash a Specialty. Beeswax always wanted at highest price.
Catalog giving FULL LINE OF SUPPLIES with prices and samples, FREE on application.
E. GRAINGER & CO., Toronto, Ont.,
Sole Agents for Canada.
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Wanted Your address on a postal for a little book on QUEEN-REARING—SENT FREE. ADEL QUEENS A SPECIALTY.
Address, HENRY ALLEY.
28Atf WENHAM, MASS.
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DAIRYMEN ARE DELIGHTED to meet those who work for us. Cow keepers always have money. We start you in business. You make large profits. Easy work. We furnish capital. Send 10 cents for full line of samples and particulars.
DRAPER PUBLISHING CO., Chicago, Ills.
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To Chautauqua Lake and Return
at one fare for the round-trip, via Nickel Plate Road, on July 24th, from Chicago and intermediate points, with return limit of Aug. 24th, account of Conference of Association of General Secretaries of Young Men's Christian Association of North America, at Chautauqua Lake. Full particulars at City Ticket Office, 111 Adams St., Chicago. 19—28A3t

Queens Now Ready to Supply by Return Mail

Stock which cannot be excelled. Each variety bred in separate apiaries, from selected mothers; have proven their qualities as great honey-gatherers.

Golden Italians Have no superior, and few equals. Untested, 75 cents; 6 for $4.00.
Red Clover Queens, which left all records behind in honey-gathering. Untested, $1.00; 6 for $5.00.
Carniolans—They are so highly recommended, being more gentle than all others. Untested, $1.00.

ROOT'S GOODS AT ROOT'S FACTORY PRICES.

C. H. W. WEBER, 2146-2148 Central Avenue,
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(Successor to Chas. F. Muth and A. Muth.)
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make a superior queen, and cell-cups started and eggs deposited therein?

Try the experiment again and make this colony hopelessly queenless in about three or four weeks after this period commences, and you will soon have all the laying workers you want, and as long as they live in that colony you can get a laying worker.

Now, then, the point I want to make is, if a worker-egg out of the swarming season will not produce a laying worker, and one during the swarming will produce a laying worker, why will there not be relatively the same difference in queens? I claim there will be, against all the evidence of text-books, professors and scientists, according to my practical experience.

One word more: The importance of having a large force of nurse-bees of the right age is all right and necessary, and plenty of field-bees to develop extra heat at night and bring in honey and pollen by day; and, above all, good stock to breed from. But don't think for one moment you can go on from one generation to another, taking eggs from your breeder during the time she has plenty of room, without at each consecutive generation getting a more tender, short-lived generation of bees, until you have a race of bees like Mr. Alley would have us to understand pure-bred Italians had become.

Linn Co., Oreg. Geo. B. Whitcomb.

Much Swarming.

My bees swarmed some the latter part of April and the first of May. Honey was then coming in freely to the middle of May, and from then on to the last week in June bees would attempt to rob and sting anything they could catch hold of. At this date the bees are having a feast even late in the evenings. It is quite a thing to see them come in missing the hives. Those that swarmed in April swarmed again last week. In all my 18 years of keeping bees I never had a colony to swarm so early in the season, then later on to swarm again. I am now beginning to store honey in the attic of my dwelling-house.

E. B. Kauffman.

Lebanon Co., Pa., July 13.

Many Years a Bee-Keeper.

I think the American Bee Journal worth its weight in gold to any bee-keeper, and I now would not be without it if it cost $5 per year. I have 48 colonies in my apiary, and they are all doing fine work. I run an apiary in Wisconsin of 100 colonies, but I think my 48 colonies here are going to beat the 100 there.

I am now 55 years old, and I might say I have been practically brought up with the honey-bee, as my father kept bees every since I can remember. So you see they are as much pets to me as my wife's canary is to her, and I can truly say they (the bees) are her pets, too, for she thinks as much of them as I do.

Warren Goucher.

Hubbard Co., Minn., July 11.

Quality and Price
correspond in Page Fence: both a little higher.
PAGE WOVEN WIRE FENCE CO., Adrian, Mich.
Please mention Bee Journal when writing.

The Emerson Binder

This Emerson stiff-board Binder with cloth back for the American Bee Journal we mail for but 60 cents; or we will send it with the Bee Journal for one year—both for only $1.40. It is a fine thing to preserve the copies of the Journal as fast as they are received. If you have this "Emerson" no further binding is necessary.

GEORGE W. YORK & CO.,
144 & 146 Erie Street, CHICAGO, ILL.

Business Queens,
Bred from best Italian honey-gathering stock, and reared in FULL COLONIES by best known methods. Guaranteed to be good Queens and free from disease. Untested, 75c each; 6, $4.00. Tested, $1.25 each.
CHAS. B. ALLEN,
18Atf Central Square, Oswego Co., N. Y.
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$5 TO START YOU IN BUSINESS
We will present you with the first $5 you take in to start you in a good paying business. Send 10 cents for full line of samples and directions how to begin.
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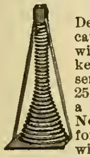
Hives, Sections, Foundation,
etc. We can save you money. Send list of goods wanted and let us quote you prices. ROOT'S GOODS ONLY. Send for Catalog.
M. H. HUNT & SON, Bell Branch, Mich.



Queen-Clipping Device Free!
The Monette Queen-Clipping Device is a fine thing for use in catching and clipping Queens' wings. It is used by many bee-keepers. Full printed directions sent with each one. We mail it for 25 cents; or will send it FREE as a premium for sending us One New subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device. Address,
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"What Happened to Ted"
BY ISABELLE HORTON.
This is a true story of the poor and unfortunate in city life. Miss Horton, the author, is a deaconess whose experiences among the city poverty stricken are both interesting and sad. This particular short story—60 pages, 5x6¾ inches, bound in paper cover—gives somewhat of an insight into a little of the hard lot of the poor. Price, postpaid, only 10 cents (stamps or silver.) Address,
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Open to both sexes from the beginning. Founded in 1846. Highest grade scholarship. First-class reputation. 25 instructors. Alumni and students occupying highest positions in Church and State. Expenses lower than other colleges of equal grade. Any young person with tact and energy can have an education. We invite correspondence. Send for catalog.
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SWEET CLOVER
And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5lb	10lb	25lb	50lb
Sweet Clover (white)....	$ .75	$1.40	$3.25	$6.00
Sweet Clover (yellow)....	.90	1.70	4.00	7.50
Alsike Clover	1.00	1.80	4.25	8.00
White Clover	1.50	2.80	6.50	12.50
Alfalfa Clover	1.00	1.80	4.25	8.00

Prices subject to market changes.

Single pound 5 cents more than the 5-pound rate, and 10 cents extra for postage and sack.

Add 25 cents to your order, for cartage, if wanted by freight, or 10 cents per pound if wanted by mail.

GEORGE W. YORK & CO.
144 & 146 Erie Street, - CHICAGO, ILL

What Yon Yonson Thinks

Vel, my ying, it is plenty bad for da N. B.-K. A. to hole deirs big convenshul vay off in Cally forny. Ay don't see vy for dom haf to tag da G. A. R. fellers around. Ay don't lak Cally forny a toll, cause it is too far off. Ay never can go horsbak an ride ole Yim clear to Cally forny. Mebby da Ingins git ole Yim's scalp to hang in deirs belt, an den ay vould be lak da feller vat vent up in a baloon, an ven dom git about 2 miles high somting broke an dom hav to valk back.

But, my goodeness, ay seen feller vat sed dat Cally forny she is awful fine country, an he say dom rais awful fine fruit an punkins, an evry ting vat is nice; but he say, Yon Yonson, it's better you not vent to Cally forny, cause ven you see vat fine fruit dom rais, an get taste of das fine climate, den you vil be spoiled for das country, an yust hanker for das nice country and climate. An mebby it don't vas any som Svede mans in Cally forny. Vel, mebby so, but evry body vat can, better go, cause dom get cheap ticket, and dom git to see plenty much fine country, an dom sure lurn a hole lot at da convenshul. Ay don't know vy for dom call da town Lost Angeles. Ay never hurd of any vat got lost in Cally forny. Course it vas fellers dere vat got plenty much bees, but dom don't vas da hole sidevalk, caus Illenois got mor bee-keepers as Cally forny, but dom don't got quite so big patch of bee-hives. An Illenois got plenty good legislature, vat give us foul brood law an money to back it. Ay rote to lots of dom law mans, an ask dom vil dom pleas be so good an vote for da bill, cause foul brood is vorser for bees dan hog colery iss for hogs, an if da bees all di dan ve don't git any more hunny, an dat vil put an end to da hunny moon. Some of dom mak answer an say dom vote for it all rite ven dom git chance. An you bet dom did, too.

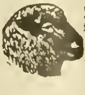
Vel, ay see it vas som fellers vat give Mr. New York fits cause he by hunny and ven he sell it he put his name on it an call it "York's hunny." Vel, if he pay for it cours it is York's hunny.

Now, ay bean rais plenty strawberries, an ay bean selling strawberries for purdneer four veeks, an ay sell more as 100 quvarts a day, some days, an ay put Yon Yonson's name on every box, an dom go lak hot pankakes, cause it is youst som nice berries in da bottom of da boxes same it is on da top. An ven dom peples see Yon Yonson's name on da box dom know it vas good fruit, cause Yon Yonson iss honest. You know ven he put his name on da boxes he haf to be, or you bet he ketch it on da phone in grate shape.

An ay tank Yon Yonson's name on fruit in das country means more as if York's name vas on dom. But in Chicago Yon Yonson's name on hunny is youst bout so good som nutting, cause dom peoples in Chicago don't vas cultivate Yon Yonson's acquaintance lak dom do York's. An if ay sen my hunny to Mr. New York, an he put his name on it, an den if it don't give good satisfaction den dom peoples vil com aroun an do York's trashing for notting. An Yon Yonson he plent lucky dat he don't vas York.

Now, if ay vont to sell hunny to York, den it is my bissnes to send him nise hunny, in nise shape, and packed honest; an deu if it bring more mony ma York's name den mine, den he can give me more for da hunny. An he mak more, too. An ay tank ve bote be plent big foolish if ve don't git so much ve can. An if Mr. New York can pay me more for my hunny po das vay, den he iss velcome to put his photograf on every box is he vant to. An yust so long he can take der hunny an pay vel for it, and sell it for good price, he help keep der price up.

Yon Yonson.



SHEEP MONEY IS GOOD MONEY and easy to make if you work for us. We will start you in business and furnish the capital. Work light and easy. Send 10 cents for ful line of samples and particulars.
DRAPER PUBLISHING CO., Chicago, Ills

Beedom Boiled Down

Treatment of Bee-Stings.

Do not rub the place when a sting is received; *do not* resort to medicines applied over the spot, as they can do little or no good; *do not* lose your temper. Do at once, if the sting appears to be a severe one, *and you have time*, scrape out the sting with the finger-nail; grasp, with the thumb and finger, the skin where the puncture is located, and raise from the flesh underneath, and *pinch it hard*, holding it firmly until, on letting loose, the pain no longer returns. Resume your work with the charitable thought toward the bees that they do not sting you in a spirit of malice. but in the legitimate defense of their home and property.—D. A. McLean, in Gleanings in Bee-Culture.

Summer Dress for Bee-Keepers.

During the principal part of the honey-flow, a prominent element of hardship is the endurance of the heat. Somtimes the heat has really made me sick, so that in spite of a press of work, I have been obliged to give up work, and lie down for an hour or two. At such times you may be sure that I am not very warmly clad. One straw hat and veil, one cotton shirt, one pair of cotton overalls, one pair of cotton socks and one pair of shoes, comprise my entire wearing apparel. Before noon shirt and pants are both thoroughly wet with perspiration.

In this heated condition, I sponge myself off with cold water before dinner, put on dry shirt and pants, and hang up the wet ones in the sun to be put on the next day. I am sure that by this refreshing change I am able to do more work.

It might be thought that applying cold water all over the body, when every part is dripping with perspiration, might make me take cold. I have never found it so, even if followed up every day. The body is so thoroughly heated that it easily resists the shock, and a brisk rubbing leaves one in a fine glow.—Dr. Miller, in "Forty Years Among the Bees."

Changing or Replacing Queens.

I do not think that the question of age should be considered in the matter of changing queens, except so far as it may be taken as a sort of a rule to judge of when they will be apt to fail. I would not replace a queen so long as she lays up to her full average, especially at this time of the year, for during the month of June any queen that has even less than the average value can supply eggs which will turn out into bees at the right time for the honey harvest; while if a general change is made, many colonies are likely to lose thousands of eggs at best, and not only this, the young queen is often very liable to bring a lot of workers on the stage of action in time to become consumers rather than producers.

A change in early spring would have been worse yet, as it would have resulted in a loss of bees at just the time when each bee is of the greatest value to push forward the rearing of others for the honey harvest.

If queens must be changed I would advise waiting till the harvest of white honey is over, for the loss of eggs usually sustained through a change of queens will then be little

Italian Queens, by Mail.
Golden and Honey Queens.

July and August.	1	6	12
Honey Queens (Untested)..	$ .75	$ 4.00	$ 7.00
" " (Tested)....	1.25	7.00	13.00
Golden " (Untested)..	.75	4.00	7.00
" " (Tested)....	1.25	7.00	13 00
2-frame Nucleus (no queen)	2.00	11.00	21.00

Breeders, $3.00 each, after June 1.

Add price of any Queen wanted with Nucleus.

Our bees are shipped in light shipping-cases. Purchaser pays express on Nuclei.

Safe arrival guaranteed of all stock sent out.

Batavia, Ill., Aug. 21, 1901.

Dear Sir:—I thought I would let you know as to results of the nucleus sent me. They were placed in 10-frame hives and now they are in fine condition. From one I removed 24 pounds of honey and had to give 6 of them more room, as they were hanging out. They have more than reached my expectations.

Yours respectfully, E. K. Meredith.

Davenport, Iowa, Dec. 31, 1901.

Your queens are fully up to standard. The honey queen that you sent my brother takes the lead. She had a rousing colony when put up for winter. The goldens can be handled without smoke or veil. Very truly yours,

John Thoeming.

Notice. — No tested stock sent out before May 15. Send money by P. O. Money Order or Express Order. **D. J. BLOCHER,**
17Atf PEARL CITY, ILL.

If you want the Bee-Book

That covers the whole Apicultural Field more completely than any other published,
send $1.20 to

Prof. A. J. Cook, Claremont, Cal.,

—FOR HIS—

"Bee-Keeper's Guide."

Liberal Discounts to the Trade.

A STANDARD-BRED

QUEEN-BEE FREE

To Our Regular Paid-in-Advance Subscribers.

We have arranged with several of the best queen-breeders to supply us during 1903 with **The Very Best Untested Italian Queens** that they can possibly rear—well worth $1.00 each. We want every one of our present regular subscribers to have at least one of these Queens. And we propose to make it easy for you to get one or more of them.

In the first place, you must be a regular subscriber to the American Bee Journal, and your own subscription **must be paid in advance.** If it is not already paid up, you can send in the necessary amount to make it so when you order one of these fine Queens.

A QUEEN FREE FOR SENDING ONE NEW SUBSCRIBER.

Send us $1.00 and the name (not your own) and address of **One NEW** subscriber for the American Bee Journal, and we will mail you one of the Queens free as a premium.

Now, go out among your bee-keeping neighbors and friends and invite them to subscribe for the old American Bee Journal. If you want some to show as samples, we will mail you, for the asking, as many copies of the American Bee Journal as you can use.

Should there be no other bee-keepers near you, and you desire one of these fine Queens any way, send us $1.50 and we will credit your subscription for one year and also mail you a Queen. Of course, it is understood that the amount sent will pay your subscription at least one year in advance of the present time. So, if your subscription is in arrears, be sure to send enough more than the $1.50 to pay all that is past due.

We prefer to use all of these Queens as premiums for getting new subscribers. But if any one wishes to purchase them aside from the Bee Journal subscription, the prices are as follows:
One Queen, 75c.; 3 Queens, $2.10; 6 Queens for $4.00.

We expect to fill the orders almost by return mail.

Now for the new subscribers that you will send us—and then the Queens that we will send you! Address,

GEORGE W. YORK & CO., 144-146 E. ERIE ST., CHICAGO, ILL.

Please Mention the Bee Journal when writing Advertisers.

or no loss, as they generally hatch into larvæ at a time when said larvæ have to be fed out of the honey stored in the hive, while the mature bees generally consume more of the stores already laid aside than they add to them.—G. M. Doolittle, in Gleanings in Bee-Culture.

Umbilical-Cordless.

"Two and a half summers have passed o'er
my head,
And I know I am failing fast,"
A bright yellow queen quite mournfully said;
"My usefulness soon will be past.

"Just a few more eggs and my task will be
done,
And I shall call on the name of the Lord
For a gift to my royal descendants each one,
That new-fangled umbilical cord.

"Eggs in profusion I have laid in this comb,
And a powerful colony results;
Now the idea that I shall be cast out of home,
I consider the chief of insults!"

Then came a man with smoker in hand,
Without any other excuse,
Pinched off the head of that old Holy Land
As he said, "You are now of no use."

Death like a flash took her from dependence,
And without a whit of reward
Left each and all of her royal descendants
No hope of an umbilical cord.

A. G. Anderson.
Kendall Co., Tex., July 6.

National Convention Notice.

The 34th Annual Convention of the National Bee-Keepers' Association will be held in Los Angeles, Calif., on August 18, 19, and 20, 1903, in Blanchard's Hall, at 235 S. Broadway. The headquarters of the Association during the convention will be at the Natick House, corner of First and Main Streets.

It is expected that this will be the largest and best convention ever held by the bee-keepers of America. Every one interested in the production of honey should be present, if at all possible. Besides the question-box, which will be one of the special features of the program, the following subjects will be discussed in papers by the prominent bee-keepers mentioned. Afterward a free and full discussion will be had by all in attendance who wish to participate. The subjects and men to introduce them are as follows:

"Honey Exchanges and Co-operation Among Bee-Keepers" by Prof. A. J. Cook, Claremont, Calif.

"How to Make Money Producing Extracted Honey," by J. F. McIntyre, Sespe, Calif. Response by E. S. Lovesy, Salt Lake City, Utah.

"The Production and Sale of Chunk Honey," by Homer H. Hyde, Floresville, Texas. Response by C. P. Dadant, Hamilton, Ill.

"The Eradication of Foul Brood," by N. E. France, Platteville, Wis.

"Reminiscences of Bee-Keeping and Bee-Keepers in the Early Days," by A. I. Root.

There will be reports by the officers, which include Pres. Hutchinson, General Manager France, and Secretary York.

The California bee-keepers are planning to give all in attendance one of the grandest receptions imaginable on the first evening, Tuesday, Aug. 18. No one will want to miss this feature of the convention.

It is an opportunity of a lifetime to take the trip to California, as all convention members can avail themselves of the low railroad rates, as it comes at the time of the Grand Army meeting in San Francisco, and the same rates apply to Los Angeles.

For further information or particulars that may be desired, address the Secretary, 144 E. Erie St., Chicago, Ill.

George W. York, *Sec.*
W. Z. Hutchinson, *Pres.*

Close Saturdays at 1 p.m.—Our customers and friends will kindly remember that beginning with July 1, for three months we will close our office and bee-supply store at 1 p.m. on Saturdays. This is our usual custom. Nearly all other firms here begin the Saturday afternoon closing with May 1st, but we keep open two months later on account of the local bee-keepers who find it more convenient to call Saturday afternoons for bee-supplies.

CARTONS FOR HONEY Wanted, to introduce the best, most practical, lowest-price Carton for honey, all things considered; **costs nothing.** We have wholesaled honey in this city for 30 years. We have seen no honey-carton equal to this. Send us five two-cent stamps, and we will send you sample, together with explanation, and some practical suggestions regarding marketing honey to best advantage; also live poultry. We originated and introduced the now popular one-pound section. Established in 1870.

H. R. WRIGHT, Wholesale Commission,
Promptness A Specialty. **ALBANY, N. Y.**
Please mention Bee Journal when writing.

BEE-SUPPLIES!
ROOT'S GOODS
AT ROOT'S PRICES.
Everything used by bee-keepers.
POUDER'S HONEY-JARS. Prompt service. Low Freight Rates.
NEW CATALOG FREE.
WALTER S. POUDER.
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FREE FOR A MONTH....
If you are interested in Sheep in any way you cannot afford to be without the best Sheep Paper published in the United States.

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HONEY AND BEESWAX

MARKET QUOTATIONS

Chicago, July 7.—At present there is little call for comb honey, some new is offered, and for fancy 14@15c per pound is asked. Extracted sells at 6@6½c for best white; amber grades, 5@6c, depending upon flavor, body and package. Beeswax, 30c. R. A. Burnett & Co.

Kansas City, June 30—No comb honey in this market. New white comb would sell for $3.50 to $3 75 for 24-section cases; amber, $3.25 to $3.50. There is considerable extracted honey on the market with scarcely any demand. Price nominal at 5½@6½c per pound. Beeswax in demand at 25@30c. C. C. Clemons & Co.

Albany, N. Y., July 18.—We are receiving some shipments of new comb honey, mostly from the South; the demand light as yet; we are holding at 15@16c. Extracted slow at 6@7c. The crop of honey in this vicinity is very light, and we shall have to depend upon other sections more than ever for our supply of honey. Beeswax, 30@32c. H. R. Wright.

Cincinnati, June 1.—Very little change in market from last report. We quote amber extracted grades at 5½@6½c in barrels; white clover, 8@9c; supply equal to demand. Comb honey, 15@16c for fancy. Beeswax, 30c.
The Fred W. Muth Co

New York, July 8.—Some new crop comb honey now arriving from Florida and the South, and fancy stock is in fair demand at 14c per pound, and 12@13c for No. 1, with no demand whatever for dark grades.

The market on extracted honey is in a very unsettled condition, with prices ranging from 5@5½c for light amber, 5½@6½c for white, and the common Southern at from 50@55c per gallon. Beeswax steady at from 30@31c.
Hildreth & Segelken.

Cincinnati, July 7.—We have reached the time when there are no settled prices in the honey market. Everybody is waiting to learn how the new crop will turn out, therefore we will sell or ask the old price. Fancy water-white brings 15@16c. Extracted, amber, in barrels, 5¼@5½c; in cans, 6@6½c; white clover, 8@8½c. Beeswax, 30c. C. H. W. Weber.

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Nat'l Bee-Keepers' Convention at Los Angeles, Aug. 18-20

AMERICAN BEE JOURNAL

43d Year. CHICAGO, ILL., JULY 30, 1903. No. 31.

WEEKLY

J. Q. SMITH,
INSPECTOR OF APIARIES FOR THE STATE OF ILLINOIS.
(See page 485.)

THE AMERICAN BEE JOURNAL

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IMPORTANT NOTICES.

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2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

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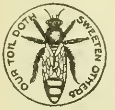
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All of these objections are overcome by an invention of Mr. Arthur Stanley, of Lee Co., Ill. Mr. Stanley makes the cell-cups according to the directions given in Mr. Doolittle's "Scientific Queen-Rearing," sticking the base of each cell to a No. 12 gun-wad. By the use of melted wax these wads, with the cell attached, are stuck, at proper intervals, to a strip of wood exactly the length of the inside width of a Langstroth brood-frame. Two wire staples driven into the inside of each end-bar, slide into slots cut in the ends of the cell-bars, and hold them in position.

The process of transferring larvæ to the cells, getting the cells built, etc., have all been described in the books and journals, and need not be repeated here. When the cells are sealed they may be picked off the bar (still attached to the gun-wads); and right here is where the special features of the Stanley process steps in. Each cell, as it is removed, is slipped into a little cylindrical cage, made of queen-excluding zinc, the cage being about two inches long, and of such a diameter that the gun-wad fits snugly, thus holding the cell in place and stopping up the end of the cage. The other end of the cage is plugged up with a gun-wad. Long rows of these cages, filled with sealed cells, are placed between two wooden strips that fit in between the end-bars of a Langstroth frame are held in position by wire staples that fit into slots cut in the ends of the strips. To hold the cages in their places, holes, a trifle larger than the diameter of the cage, are bored, at proper intervals, through the upper strip, thus allowing the cages to be slipped down through the upper bar, until their lower ends rest in corresponding holes bored part way through the lower bar.

A frame full of these cages, stocked with cells, may be hung in a queenless colony, and will require no attention whatever except to remove the queens as they are needed. The workers can freely pass into and through the cages, cluster upon the cells, care for them, and feed the queens after they hatch, exactly as well as though the queens were uncaged.

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BEE JOURNAL

43d YEAR. CHICAGO, ILL., JULY 30, 1903. No. 31.

Editorial Comments

The Honey Crop of 1903, Prices, Etc.—Editor Root, of Gleanings in Bee-Culture, sums up the honey prospects and prices, in the United States, as follows:

> This has been a peculiar season; but taking all things into consideration, there will be more white-clover honey this year than last. The season has been exceptionally good in a great part of the white-clover region, particularly in Wisconsin, Minnesota, Illinois, Iowa, Indiana, and Ohio. In some of the Southern States the season has been poor. In the New England States there has been an almost complete failure; but recent rains have toned up the situation so that some honey will be secured. The yield of white honey has been light in many parts of New York; but as in the New England States, the recent rains have improved the conditions, but not quite enough to affect materially the crop of white honey, but sufficient to make, probably, a fair flow from buckwheat.
>
> In Pennsylvania the season has been poor to fair. In Nevada and Utah the season has been good, and the honey is of first quality. In Arizona the flow has been less than the average. In Kansas and Nebraska the crops have been light in most sections. In Washington the season has been poor. Texas will not come up to the average. Idaho has had a severe loss of bees. In Colorado there may possibly be the usual crop, but the season was unfavorable in the early part of it. In Southern California, notwithstanding the early prospects were so flattering, there will be only about a third of a crop. In the central part of the State the season is little if any better.
>
> As to the quality, the honey will be extra-fine this year; and even if there should be more of it this year than last, it will be so much better that the prices ought to hold the level of last year, especially if we take into consideration the general advance in other things during the past year. In the Eastern markets, where production has been light, there ought to be a general toning-up of prices. There will not be a large amount of California honey shipped east this year, probably; so what little honey is produced ought to bring good prices.
>
> After writing the foregoing the weather turned cold, and this seems to be general over a great portion of the United States. If this cool weather continues it will chop the flow from white clover almost square off. That being the case, the expected crop will not be as large by considerable as seemed likely on the surface of things three days ago.

Our own contribution to the reports as published in the July 15th issue of that paper is this, dated July 1:

> Our reports show that the far East has practically no honey, and the far West perhaps not more than half a crop. The central portions of the country seem to be having an enormous flow; especially is this true of the locality within, say, 300 miles of Chicago. The demand for bee-keepers' supplies has not been so great in ten years. It seems that everybody wants a lot of supplies, and wants them right away. There seems to have been a great deal of swarming, and a good yield of white clover. Personally, we have never seen such a perfect mat of white clover bloom as there is in this locality this season.
>
> We doubt if it is necessary for the price of honey to be lowered very much, if any, from the price of last season. We think the people are ready to buy honey more freely than ever before. This, we think will be especially true as the bulk of the honey produced is of white clover, and that seems to be the kind preferred by the majority of the people; at least they *think* that is the kind they ought to have. The joke is usually on them, as they are apt to call nearly all kinds of honey clover honey. There is practically no new honey on this market as yet, but we suppose it will begin to come in very soon.

A Robber-Cloth is one of the things that costs so little and is so useful that no beginner should be without one or two. It is very easily made. Here is what Dr. Miller, the inventor, says about it in his book, "Forty Years Among the Bees:"

> I take a piece of stout cotton cloth (sheeting) large enough to cover a hive and hang down four inches or more at both sides and at each end. This must be weighted down at the side with lath, and for this purpose I take four pieces of lath about as long as the hive. I lay down one piece of lath with another piece on it, and one edge of the cloth between the two pieces of lath. I then nail the two together and clinch the nails. I use the other two pieces of lath for the opposite edge of the cloth. This makes a good robber-cloth just as it is, but it is better to have the ends also weighted down, especially on a windy day. For this purpose I made a hem in each end, and put in it shot, nails, pebbles, or something of the kind, stitching across the hem here and there so the weighting material will not all run together at one side or other.
>
> In any case where one wants to cover up a hive quickly against robbers, as when opening and closing the same hive frequently for the sake of putting in or taking out combs, this robber-cloth will be found a great convenience. No careful adjustment is needed, as in putting on a regular hive-cover, but one can take hold of the lath with one hand, and with a single throw the hive is covered securely, with no killing of bees if any should happen to be in the way.

Working for Beeswax as the Chief Crop, with honey as a secondary product, is a matter often discussed, but seldom tried in real practice. It is not impossible, however, that in some localities it may yet prove practicable. The following upon the subject appears in the Australasian Bee-Keeper:

> In connection with the production of beeswax in the West Indies, a suggestion has recently been made that—inasmuch as Muscovado sugar can now be purchased throughout the West Indies in wholesale quantities at from 3s. to 4s. per cwt., while beeswax is worth about £8 cwt., and taking into consideration the fact that the honey-flow does not exceed four months of the year in the most favorable localities—it would pay well to feed the bees nearly all the year round either with dry sugar, syrup or molasses, making the honey produced a by-product and the wax the main product. It is said that it takes about 10 pounds of sugar to make 1 pound of beeswax, therefore should the suggestion prove a practical one, it would be a great boon to West Indian bee-keepers, who would no doubt then import a species of bee from India which is especially suitable for wax-production.

A Cure for Moths in Hives is often asked for, and the usual answer is strong colonies and Italian bees. But such a cure cannot be applied in a minute, and in the meantime some help may be obtained with trifling cost and trouble by rolling into the entrance of the hive a mothball. This is recommended in the Australasian Bee-Keeper.

Direct Introduction of Queens is a desideratum worth working for, and the following letter from Dr. Miller seems to give promise that it may yet be reached:

> Mr. Editor:—I am sorry I cannot remember who it was that gave us the hint that introduction of queens was made more sure by wetting the queens. He certainly deserves thanks. I tried it in a considerable number of cases, and was successful in every case. But in each case the bees to which the queen was introduced has been queenless a longer or shorter time, and a flood of honey was on, so that I could not be certain there would have been a failure if the queens had not been wet.
>
> I then determined to go a little farther, and drown the queen till apparently dead, and to put it to the severest test by giving a queen to a colony immediately upon the removal of its own queen. I took from a strong colony a queen that was in full laying, and gave it a laying queen from a nucleus, with no delay except the time spent in drowning the queen introduced—possibly three or four minutes. The queen was kept in water till she curled up as if dead. Then I laid her on the top-bar of the colony from which I had just removed the queen. The bees went to licking her just as they would their own queen, and

in a minute or two she revived, and the next time I looked in the hive she was laying all right. At the same time I thus introduced her, I also introduced in the same way into the nucleus the queen taken from the full colony, and with equal success.

I tried the same thing in two other cases. In one of them I used cold water right from the well, and the queen was so long in giving up that I put her in while still able to crawl. Success followed all the same. But I was not so successful with the queens taken from the full colonies and introduced into the nuclei—at least as to one of them, for unfortunately I lost track of the other. Whatever may have been the reason, the one queen was missing from the nucleus when next I looked for it.

It is possible that my success was exceptional in these cases, and that failures instead of successes would be the general rule. It is also just possible that if all the kinks were thoroughly understood there might be success in every case. I should prefer to say nothing about the matter till after time to give it a more thorough trial, but if there is any reliability in the plan it is better to know it as soon as possible, and I hope others may aid in testing it. C. C. Miller.

Some Useful Hints About Using the Smoker are thus given by Arthur C. Miller in the American Bee-Keeper:

> But there are a number of little kinks which go to make the use of any smoker more satisfactory, and the handling of bees more pleasant. The first of these is starting the fire. Saltpetered rags will do it; kerosene will do it; pine shavings will do it, but a handful of charcoal (half-burnt twigs and chips from a bonfire) is by all odds the best thing to put in on top of the rags or shavings. A few puffs will kindle the coal, and then punk, chips, hard wood or almost anything that can burn will ignite and stay burning.
>
> A maxim which every bee-keeper should paste in front of his bee-veil is: Never open a hive without a well-fired smoker right at hand, You may never need it, or life may depend on it. A really good, ever-ready smoker is cheap at several times present prices. Never take the lit smoker indoors unless you stay there with it. When through using it dump the fire and put it out, and if the smoker is hot, set it on something which cannot burn. Leave the top off and then you won't have to bang it to pieces to open it when you want to fire up again.

Phacelia Tanacetifolia.—The following has been received from Dr. Miller:

> "I notice that the seed of phacelia is advertised in the Bee Journal. I heartily commend a trial, if it be only to cultivate phacelia as a flowering plant. Years ago, as well as the past winter, I cultivated it as a window-plant in winter with satisfaction. It has a beautiful blue flower, in appearance much like a heliotrope, and somewhat approaching heliotrope in fragrance, although I am not sure that it has any fragrance when grown in the open ground. A few plants that I had outdoors were busily visited by the bees."

The foregoing, while interesting to flower-lovers, throws no light whatever upon the important question as to the value of phacelia as a forage-plant. In Europe it is highly extolled as such, although the testimony is not all to the same effect. There is probably little question that it is one of the very best honey-plants, and *if* valuable for forage it is an undoubted acquisition. Much doubt is thrown upon this by the fact that California bee-keepers are silent as the grave with regard to its value for forage, although the plant was introduced into Europe from California. If any of the California people have any knowledge about it, whether good or bad, they would be conferring a favor to the fraternity in general by telling what they know.

Yield From Different Cuttings of Alfalfa.—To the question, "Which cutting of the alfalfa yields the most honey, the first, second, or third?" the Rocky Mountain Journal makes reply:

> The first cutting. The second cutting, supplemented by sweet clover, is nearly as good, while the third cutting, coming so late as it does in September, furnishes very little bloom; at least, such is the case in northern Colorado.

Association Notes

The Los Angeles Convention, if all signs do not fail, promises to be the greatest meeting the National has ever held. Here is what Geo. W. Brodbeck has to say, who is President of the California National Honey-Producers' Association, with headquarters in Los Angeles:

> I am looking forward to a great meeting, and every one that I meet informs me they are coming. So do not be surprised if you witness the largest gathering of bee-keepers ever held in the United States.
>
> Now, do not imagine that our summer weather is so oppressive as you find it in the East, for it is not; and then there is not a night but that you will feel comfortable with a blanket as a cover. In fact, California is becoming famous as a summer resort as well as a winter resort. All who come should provide themselves with warm clothing, for newcomers are very careless about becoming acclimated, and as a result often suffer from colds, etc.
>
> Advise all who come, to arrange their home and business affairs so that they can spend some time here on the Coast, for they will be sure to enjoy it, and should they fail to do this there will surely be occasion for regret. Geo. W. Brodbeck.

The time is getting short now for preparation for attending the convention. As suggested last week, we hope all who expect to join the company of bee-keepers starting from Chicago the evening of August 12, will be sure to let us know by August 1, if possible, so that we can arrange for berths, etc., here in good time. The travel on the railroads at the time of the convention will likely be very heavy on account of the G. A. R. meeting at San Francisco, so that arrangements will have to be made a few days in advance in order to get the accommodations that may be wanted. We are willing to do all we can here in order to insure a comfortable journey for those who expect to go, if they will let us know in time. Of course, we can do nothing for any one after August 10, and, as mentioned before, all arrangements ought to be made at least a full week before starting from Chicago.

A car-load of bee-keepers going across the continent will in itself be great for those who can join in it. To spend several days together on a trip like that will be almost better than an ordinary convention, especially if the company is as congenial as anticipated. If you can get away at all it will pay you to go, as the trip is well worth taking, and one that will be enjoyed all the rest of your life.

In addition to those whom we have mentioned before as expecting to go, are these:

Mr. and Mrs. R. J. McColly, of Wood Co., Ohio.
D. J. Price, of LaSalle Co., Ill.
M. Best, of Lucas Co., Ohio.
Mr. and Mrs. Leo F. Hanegan, of St. Croix Co., Wis.
L. Highbarger, of Ogle Co., Ill.

Constitution of the Chicago-Northwestern.—A request has come in for the publication of the Constitution of this Association. It is as follows:

ARTICLE I.—Name.

This organization shall be known as the Chicago-Northwestern Bee-Keepers' Association.

ARTICLE II.—Object.

Its object shall be to promote and protect the interests of its members.

ARTICLE III.—Membership.

Any person interested in bees may become a member upon the payment of a membership fee of one dollar ($1.00) annually to the Secretary.

ARTICLE IV.—Officers.

Sec. 1.—The officers of this Association shall be a President, Vice-President, and Secretary-Treasurer, who shall form the executive committee, and shall prepare a suitable program for each meeting.

Sec. 2.—The term of office of all officers shall be for one (1) year or until their successors are elected and qualified.

Sec. 3.—The election of officers shall be by ballot at the annual meeting, and a majority of votes cast shall elect.

Sec. 4.—Vacancies in office shall be filled by the Executive Committee.

Sec. 5.—The officers shall perform such duties as usually devolve on similar officers in other organizations of bee keepers.

Any other questions shall be decided according to "Roberts' Rules of Order."

ARTICLE V.—Place and Time of Meeting.

The place of meeting shall be in Chicago, Ill., the first (1st) Wednesday and Thursday of December, or such other days as may be selected by the Executive Committee, notice of which shall be mailed to each member ten (10) days before the meeting.

ARTICLE VI.—Order of Business.

The meeting of the Association shall be as far as practicable governed by the following:

Call to Order.
Reading Minutes of Last Meeting.
President's Address.
Treasurer's Report.
Reports of Committees.
Unfinished Business.
Reception of Members and Dues.
Miscellaneous Business.
Election and Installation of Officers.
Papers on Assigned Subjects.
Discussion.
Adjournment.

ARTICLE VII.—Amendments.

This Constitution may be amended by a two-thirds (⅔) vote of the membership in attendance at any regular meeting, provided that notice of such proposed amendment be mailed to the members by the Secretary not less than thirty (30) days before the next regular meeting.

A bee-keepers' association requires only the simplest form of constitution for its government. The above is probably sufficient for all ordinary purposes. It may not be as elaborate as some people would like, but in the five years that it has been used it has met every need that has arisen.

We are often asked for a copy of a model constitution for a local bee-keepers' association. The foregoing can be used at least as a start, and changes or additions can be made wherever it is thought desirable.

Mr. N. A. Kluck asks the following question about sleeping on the way to Los Angeles convention:

> Does a "double-berth sleeper" mean that two can use it for $6 to California, all the way, or till we get there from Chicago?
>
> N. A. Kluck.

Yes, two persons—if not too large—can occupy a double-berth all the way from Chicago to Los Angeles in a tourist sleeping-car for only $6.00, excepting the extra stop-over and the trip to the Grand Canyon, which would be $2.00 more for sleeper, and $6.50 more for carfare.

Sketches of Beedomites

MR. J. Q. SMITH.

John Quincy Smith was born April 14, 1846, in Berlin, Mahoning county, Ohio. When he was six years old his parents moved overland in a covered wagon and located on a farm in Darke county, Ohio. Here he attended the district school for several years. At the age of 14 he was apprenticed to learn tailoring at Greenville, Ohio, where he worked at his trade until 1864. Then he enlisted in the 152nd Ohio Volunteer Infantry. When the war closed, in 1865, he went to Springfield, Ill., and Oct. 21, 1866, married Miss Martha C. Busher of that city.

Immediately after his marriage Mr. Smith came to Lincoln, Ill., where he still resides and follows his trade, as well as bee-keeping.

In 1874 he became interested in bees, traded a double-barrelled shot-gun for three colonies, and procured a copy of "Langstroth on the Honey-Bee" and other bee-literature, in order to understand apiculture thoroughly.

He soon had an apiary of 102 colonies, which he Italianized in 1882. During this year he found to his dismay that over 80 colonies were affected with foul brood, leaving only 17 live colonies. He traced the affection to the queens he had procured from a noted queen-breeder in southern Illinois.

In 1885 Mr. Smith organized the Central Illinois Bee-Keepers' Association under the charter of which he was president until 1892, when the Association joined the Illinois State Bee-Keepers' Organization, of which he has been president for the past six years.

Mr. Smith is a member of the Methodist church, and is also identified with a number of fraternal societies, and holds many responsible offices.

Mr. Smith has three children—Oliver, a merchant tailor in Iowa; Claudia, an accomplished young lady, who died at the age of 18, in 1894; and Walter E., who is at present engaged as junior member of the firm of J. Q. Smith & Son. All were graduates of the Lincoln High School and Lincoln Business College.

Mr. Smith made the first exhibit of section comb honey at the State Fair of Illinois, receiving the first premium of $5.00 on the same.

Mr. Smith was recently appointed inspector of apiaries for the State of Illinois, beginning his work July 1. We have met him at the Illinois State Fairs and at meetings of the State Bee-Keepers' Association. He should make an ideal official in his work among the bees and bee-keepers of Illinois.

To Test Seed.—Chas. R. Neillie, of Cuyhoga Co., Ohio, sends us the following test for seed:

> Lay two or more sticks on a bread-pan and fold a strip of woolen cloth down between the sticks. Put seed in the folds of the cloth and pour water in the pan till it just touches the folds. In a few days you will see what percent of the seed germinates.

Convention Proceedings

Chicago-Northwestern Convention.

Report of the Chicago-Northwestern Bee-Keepers' Convention, held in Chicago, Dec. 3 and 4, 1902.

BY OUR OWN SHORTHAND REPORTER.

(Continued from page 470.)

REARING QUEENS IN CELL-CUPS.

"Can as good queen be reared from a small Doolittle cup as can be from one as large as can be used, say 11-32 of an inch in diameter?"

Mr. Stanley—That depends upon other conditions, I think. The cell has nothing to do with the queen, to my notion, so long as the queen is nursed and fed. The size of the cup has nothing to do with it.

Dr. Miller—I should say in answer to that question that there should be as good a queen reared if the larva is in a worker-cell, because the bees don't keep it in that. The authorities used to tell us that they turned three cells into one. They don't do anything of that kind, not in my locality! They simply fill out, enlarge the cell a little at the outside, and then fill them up, and the larva comes out to where it is larger, and they may be in as large a cell as they start in a queen-cell. I think Mr. Stanley is right, that the first part of the cell has very little to do with it.

Mr. Abbott—Is that in any bee-book in existence?

Dr. Miller—I don't know.

Mr. Abbott—I think that's brand new information. Every authority says they enlarge the cell.

Dr. Miller—That's true.

Mr. Abbott—They say they tear down—

Dr. Miller—They say they make three cells into one. They never do it. It's absolutely new.

Pres. York—This is the place to find out.

Dr. Miller—Any of them have eyes to see.

Mr. Abbott—They have had their eyes for years.

Mr. Colburn—If you will read Dr. Miller's answers to correspondents you will find it.

EIGHT-FRAME VS. TEN-FRAME HIVES FOR COMB HONEY.

"Why are 8-frame hives better than the 10-frame for comb honey?"

Dr. Miller—Are they?

Pres. York—How many think the 8-frame hive better for comb honey than the 10-frame? Two.

Pres. York—Why do you think so, Mr. Niver?

Mr. Niver—By trying 6, 8, 9 and 10. I got more honey out of the 8.

Pres. York—How many think 10 frames are the best? A lot more.

Pres. York—Mr. Duff, what makes you think so?

Mr. Duff—Why I think the 10 are better? I won't say that they are better for all localities, but they are better for Chicago. In fact, I proved that to my own satisfaction.

Mr. Colburn—If the 10-frame hive is better than the 8-frame, how much better is it? There are 25 percent more frames, and we ought to get 25 percent more honey. Do you get that much more comb honey?

Dr. Miller—I don't know.

Mr. Wilcox—I have tried on both sides of this question, but I think I can say that the hive which will give you the most bees at the time of your harvest will give you the most honey, and if your 8-frame is too small, then the larger hive will give you the most honey, but if you use your 8-frame two stories high it can be worked that way, and then remove one story when you put on the supers, you will get quite as much, and they are more convenient to handle. I don't know but what I prefer that way, especially as I produce both comb and extracted honey, and because then the combs are ready to remove and use for extracting purposes. At the present time I am using them, although I did get more honey when I used 10-frame hives than with 8.

Mr. Horstmann—I approve of 8-frame hives for comb honey, provided you have the time to attend to them. You can see very easily that you will get more honey in proportion from an 8-frame than from a 10. You can rear all the bees you want in a 10-frame. No reason in the world. You can put a story under. You can make a 16-frame hive, and take one story out when the flow begins, then you will have all those bees to work in the super. I have run both 8 and 10 frame hives. I tested it, and I found out that my 8-frame hives gave me more honey than the 10-frame. I had several 10-frame hives that gave me no honey, and only one 8 that didn't give me any, because they swarmed a great deal. I let them swarm. I wanted some more swarms, but the experience I had taught me that the 8-frame hives are the best for comb honey. You have to produce 32 sections in 10-frame hives every time you produce 24 in an 8-frame hive; that would allow four sections to a frame. I say that if a bee-keeper has time to attend to 8-frame hives, give them the proper attention, that he will get more salable honey from an 8-frame hive than from a 10-frame hive. We know the bees have to fill these two extra frames with either brood or stores before they will go into the supers. I noticed also that the bees filled up the supers on the 8 better than the 10, on account of their being a little bit crowded.

Mr. Abbott—You say the 8-frame hives are the best, yet you compare a 16-frame with a 10.

Mr. Horstmann—Now, you take an 8-frame and put a story under and that makes it 16; you take the extra 8 frames off when the honey-flow is gone.

Mr. Abbott—But the 10-frame man could add below, too.

Mr. Horstmann—He would have just as much work if he wanted to handle dummies. You have a large super on a small brood-nest—that's the disadvantage.

Mr. Wheeler—I use a different hive, consequently I can't talk about 8 or 10 frames. When I want to enlarge my brood-nest I put on top. I gauge the amount of brood by my strength of bees. Very often in the spring I hive some swarms in shallow brood-chambers. When the honey-flow comes I take off when I want to.

Mr. Horstmann—Before Mr. France goes away I wish to make a motion that a vote of thanks be given him for his presence and instructive address on foul brood.

Dr. Miller—I take pleasure in seconding that motion.

Mr. France—I will say that these samples of foul brood I have carefully selected; we have not had sufficient light to see the disease in its various stages. For those of you who will take care of them I will leave these samples; after thorough examination destroy it by fire. I want you to see the scale by daylight.

Mr. Horstmann's motion was carried unanimously, after which the convention adjourned to meet at the call of the Executive Committee.

Contributed Articles

The Future of the National Association.

BY HERMAN F. MOORE.

In view of the nearness of the annual meeting of our National Bee Keeper's Association, at Los Angeles, it may not be out of order for a private in the rear rank to make a few suggestions.

It seems to me that in view of the fact that there are 700,000 (or a few less) bee-keepers in one great country, that as a class having certain rights and interests in common, they are falling far short of wielding the power and exerting the influence to which they are entitled.

Notice a few of our commercial combinations to illustrate the fact that numbers, brains and money form a union impossible to beat.

I wish briefly to note a few of the means by which the objects of our National Association can be best carried out, said object being, Promoting the interests of bee-keepers; protecting and defending the members in their lawful rights; and enforcing laws against the adulteration of honey.

First let us amend Article 11 of the Constitution, "Objects," so as to read as follows, after the word "honey," "and to procure the enactment of new laws whenever and wherever necessary to protect the members."

But some one may say, "Let each State look out for itself in such matters." The answer is, there are very few States where the bee-keepers are prepared with either the knowledge or money necessary to place a new law on the statute books, about foul brood, or adulteration, or spraying fruit-bloom. Witness our own State of Illinois with no spraying law and until recently no foul brood law.

We as bee-keepers must stand or fall together, and only by the united action of all can such laws as are needed be speedily placed on the statute books of all the States.

Also let us amend Sec. 9 of Article V, last clause, so as to read, "provided that not more than four assessments shall be made in any one year, and no one to an amount exceeding the annual membership fee, without a majority vote of all the members of the Association." Money is more necessary than any one other thing, and no beeman, with his heart in the right spot would object to $5.00 a year, if the Association opens a campaign of push, and goes to doing things.

The air of our beloved land is full of electricity. All know what great things are going on about us, and shall the bee-people fall behind the procession? No! let us raise up 500,000 strong, and march to victory.

But how to get the 500,000. Ah, there's the rub! Now, in strict confidence, I'll tell you.

First, do you know that the price-lists of our hive-dealers, great and small, go to nearly 200,000 who keeps bees, far and near?

Do you know that the bee-papers are read by nearly 40,000? What an army!

Several years ago, when the writer was corresponding with the General Manager regarding the prosecutions in Chicago, he used this expression, "And we can have *1,000 members of the National*." I well remember that he feared he was guilty of unjustifiable exaggeration. And now we have over the thousand.

Oh! my brothers and sisters in the sweetest, purest, cleanest business on earth, let us remember, "according to your faith be it unto you." Let us set our faces toward the rising sun, and throw our caps high in air, and shout, *10,000 members for the National*!

These are not idle vaporings. Let every bee-paper in America be furnished with a copy for every issue, every week or two weeks, or each month, for a column headed, "What the National is Doing." Let the General Manager be responsible for it, that everything of interest to the members, even down to the smallest details, be set down in this column. In our 50 States there can be no lack of material.

After seeing the National column appear for a few months the 40,000 readers would get it into their heads that there was a *real, live entity* bearing such a name. If these all knew the facts about the acts and aims of our National, as do you and I, they would all join, and we would have 40,000 members instead of 10,000.

I believe a mere request would give a page to the "National" in every price-list mailed to 200,000. Think of it, my friend! If the National should pay 1 cent postage on a circular to send to each one of these, and have a present of the envelops, paper and printing, it would cost $2,000. Is this not a field worth cultivating?

So much for publicity, or promotion, as they said about the World's Fair. How many of you know that they paid Major P. Handy $15,000 a year for three years to do such work for the World's Fair, and $100,000 expenses besides? (These figures are not accurate.)

There is unlimited room for growth of our local associations. We are somewhat abashed that our little Chicago-Northwestern, 5 years old, has only 77 members to send to the "National." But if each State had an association of 77 members to join in a body, the National would have 3750 members now.

Cook Co., Ill.

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Honey Exhibits—Their Value and Advantages

(Read at the last Minnesota Bee-Keepers' Convention.)

BY WALTER R. ANSELL.

The title of my paper might suggest that I propose telling you how to prepare for and put up a honey exhibit, but such is not my intention. I should find myself up against too many conflicting methods in the former, and for the latter I possess no qualification. I wish to touch more on the general principles of exhibits and, with a view to discussion, to suggest to you some reasons in support of my belief that honey exhibits are helpful to bee-keepers and instructive to them as well as to the general public.

And I should like to invite your attention to some methods for facilitating and increasing such exhibits.

Exhibitions, besides their educational value, are very useful as advertisements, and I also want you to view them in this light. If honey could be produced as cheaply as sugar, it might sooner be classed amongst the necessities of life, and, as such, would require no especial advertising; and even now it runs sugar so closely in price that, its superiority over the latter for many uses considered, it is conceivable that if placed prominently, attractively and frequently before the public eye, it would not be long in commending itself more than at present to the public palate.

That is just what we want, and we must not neglect any of the means at our disposal for effecting this object. Of course we could all sell more honey if we could get it, but I want to see both the demand and the price improve; and one will assuredly follow the other.

Without organized exhibitions the public would be dependent upon the exhibits in their local grocers' stores, alas! too often a sorry recommendation.

I want them to get to know what honey ought to be, both comb and extracted. I want them educated in a nice discrimination between clean honey and dirty honey; between thick and thin honey; between pure and adulterated honey, as you and I are educated. Then they will refuse the leaky or travel-stained combs, the thin, badly extracted or adulterated honey; a greater uniformity of excellence will result, because we shall all be on our mettle to send our honey to market in the best possible condition, and the adulterator will sooner be discovered. Then will the demand for good honey increase, and the slipshod bee-keeper or dishonest trader be left out in the cold or have to amend his ways; and then we may confidently speculate on higher and more uniform prices.

We can also ourselves learn a great deal from honey exhibits, and, alas for poor human nature, more especially from competitive exhibits. I have no doubt that if the number of honey exhibitors at State and County Fairs could be multiplied, it would conduce to far greater excellence in all kinds and grades of honey. This, as I have endeavored to show, would give us bee-keepers better times; and, as the prosperity of a people is made up of the prosperity of its units, so would the State be benefited.

And here I would touch on the encouragement which should be given to honey exhibits by the State. I am not competent to enter into a consideration of the objects and the means at the disposal of our State Agricultural Society. I only wish to throw out the suggestion that the more inducements they can offer honey exhibitors, the greater number of exhibitors will they attract; and, possibly, by an inconsiderably increased expense, an important advance in their objects might be achieved.

An exhibitor's expenses are not light, especially if he has to ship his honey from a distance. And when the value of his time is considered, I am not surprised that many shrink from the risk.

A fairly large exhibit can scarcely be put up by a country bee-keeper at our State Fair under an outlay for freight, cartage and help of about $30 to $50, irrespective of the bee-keeper's own time; at least such is my own experience. Of course we must not expect a guarantee of indemnification; I only suggest that the State might help us a little more if we are willing to help ourselves.

To those of you who have not yet become exhibitors at the State Fair let me throw out the suggestion that you just try *once*. Not necessarily a large exhibit, but an excellent one. You could send up a case or two of different kinds of comb honey, or a box of extracted honey in glass at an expense of about a dollar; you need not come yourself, though of course we should all be glad to see you; and you might gain $10 or $20 in premiums. Then you would come next year yourself with a much larger show, and I can assure you of a great welcome from present exhibitors.

If there were more entries made, we should certainly receive greater recognition from the Fair Committee.

As I think there must be some here who are not well acquainted with the various classes of the products of the apiary in which they can compete for premiums at the State Fair, I have brought some of this year's premium lists which are here on the table and entirely at your disposal. Mr. Gordon, superintendent of our building, who I am glad to see is here, will, I am sure, with his usual good nature, answer any question for your guidance.

But there is another kind of exhibition which I feel sure we might try on our own account; and that is a permanent honey exhibit in the city. In fact, a honey exchange, where honey would be bought and sold, wholesale and retail, at fixed prices for various grades of honey with the assurance of obtaining the best possible prices, and an advance if needed. There would be full security for his honey to the producer and to the buyer for the purity of the honey. I can assure you it is no infrequent thing to see a farmer bee-keeper bring up a load of excellent honey with his team, and, after applying at two or three grocers' stores, sell the lot to one of them at 20 percent less than he would get if he took it to a reputable commission firm.

Or our honey exchange might take the form of a honey department in connection with some large grocery concern; and in either case my proposition is distinctly a business one, and one that would be readily backed by a bank.

I feel sure that if this Association would appoint a really live committee we could have a honey exchange, a permanent honey exhibit, established in time to receive next year's Minnesota crop. Branches would of course be established at some of the larger provincial towns to receive the near-by crop, but in all cases exhibition would be our advertisement, combination our strength, and good management our salvation.

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

She Lives With Her Bees.

I have enjoyed our department in the American Bee Journal so thoroughly as a "silent partner" that I had not thought you would care to hear from me. I always enjoy the "Reliable" reading. That is my way of attending the National Convenion and other bee-keepers' conventions, and I feel almost a personal acquaintance with all the writers, and have often wished I could write as others can. I have not a faculty for expressing my thoughts in writing, and, besides, I have very weak nerves and am obliged to write with a pencil. Death has claimed so many of our old members this year, that it makes one feel sad. They were like old friends. Yes, dear sister, you are fortunate indeed to have Dr. Miller to advise and help you. May you keep him many years. I always enjoy his department.

I have kept bees about 13 years. My son started me in bee-keeping and I had everything to learn. I made a great many failures, but finally became reasonably successful. I have about 40 colonies this spring. They are in as good condition as can be expected. They have had plenty of dandelions to work on. The rain spoiled the "Hum of the bees in the apple-bloom," and now white clover is coming on, but it rains and the wind blows night and day.

I do all my work in my apiary, also scrape all the sections and pack all the honey in 12-pound cases, and what I don't sell here at home I ship West. Yes, I stamp my name on my cases, but not on the sections. I am the only bee-keeper within the city limits, and I very seldom see any of the farmers that keep bees. They have no use for a bee-paper. They understand the whole business and bring their honey to the stores just as it comes from the hives!

I put up my own shipping-cases and thought I was quite a bee-keeper until I read Sister Griffith's letter. It took all the conceit out of me, but it was grand. I am 60 years old. How happy I would be if I thought I could care for my bees till I am 75. It won't be long. Years go so rapidly. I live out-of-doors with my bees all summer.

Crawford Co., Wis. MRS. PAUL BARRETTE.

If the others enjoy your letter as much as I have, you need not worry about not having the faculty for expressing your thoughts in writing.

Bee-Keeping in Early Days—Clipping Queens.

The American Bee Journal has always been interesting to me, and for years of its youth I was a subscriber to it, but for some cause it was discontinued till I sent for it this year. I see it was established the year I was married, so it is of long-standing.

The Sisters' department is interesting. It is always the first I look for when the paper comes, and I hope it may continue. I can hardly remember the time when I did not have something to do with the bees, as my father kept them when I was a child (but, of course, in the old style). When we wanted some honey to eat the sulphured sticks were called for and placed in a hole in the ground and set on fire, and a hive of bees placed over it and smothered, then the honey taken out. When I began keeping bees I got the movable frame and began reading bee-literature and have read some every year since, but I feel I have only made a beginning. I think the Sister's department might be improved by having a little more of it.

I have never kept over 40 colonies, and last fall I put into winter-quarters 33 colonies. Four died and three are weak. I have always wintered them out-doors, and sometimes the hives would be nearly covered with snow for weeks, and it would be more work for me to get them in and out of cellar, as I am alone and do all the work myself, since my dear husband left me for a better world than this, nine years ago,

I have not been so fortunate as to get the big yields that some we read of have, but they are not only beneficial in giving me a little "pin money" but in helping me to go without my crutches, as there is nothing better for rheumatism than the sting of bees (at least with me). I expect to keep bees as long as I am well enough to care for them.

Bees built up nicely this year on fruit-bloom, but our surplus is from white clover, and basswood has been thinned out very much.

Seeing many kinds of machines for clipping queens' wings I would say for the benefit of beginners, don't buy a machine but use what the good Lord has given every one of us, our two fingers and thumbs. My plan is to pick the queen off the comb with the thumb and finger of my right hand, and place her feet on my first finger of the left hand, and then fasten them with the thumb, when, with a small pair of scissors in the right hand, you can easily cut off one of the large wings. As there are four wings cut one each year till she is old enough to be replaced by a young one. I have never made a mistake but once, and that was my first experience. I cut off one leg with the wing, but she did her work just the same. MRS. R. A. HUNTINGTON.

Genesee Co., N. Y., June 1.

So you think the Sister's department might be improved by having a little more of it. Well, if the sisters continue to increase in their contributions as they have been doing lately, we may have to petition the Editor for more room. [We have no objection to being petitioned.—EDITOR.]

Bees Unusually Cross.

For those who have bees enough to occupy all their time, there are some unpleasant features connected with the work not realized by those who have only a few colonies. For instance, to-day (July 17) we went to the Wilson apiary. It was cloudy and chilly, not a fit day to work with bees, but the work must be done. I can't say that the bees were exactly glad to see us, but certainly gave us a warm reception, and they were all at home.

We are having a good honey-flow, but it seems to me that our bees are unusually cross. In taking off honey we have not used an escape of any kind so far this year. Simply set the supers of honey on the top of the hive and let bees run out when they please. An easy way to take off honey. They can sit there all day long and not a bee will touch them. Not a trace of robbers. Something we have not enjoyed in years. And yet, as I said, the bees are unusually cross. I can't account for it.

Honey as a Health-Food is the name of a 16-page leaflet (3½x6 inches) which is designed to help increase the demand and sale of honey. The first part is devoted to a consideration of "Honey as Food," written by Dr. C. C. Miller. The last part contains "Honey-Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by every one who has honey for sale. It is almost certain to make good customers for honey. We know, for we are using it ourselves.

PRICES, prepaid—Sample copy free; 10 for 20 cts.; 25 for 40 cts.; 50 for 70 cts.; 100 for $1.25; 250 for $2.25; 500 for $4.00; 1000 for $7.50. Your business card printed free at the bottom of the front page, on all orders for 100 or more copies. Send all orders to the Bee Journal office.

The Premiums offered this week are well worth working for. Look at them.

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, Ohio.

NOT AN OFFENSIVE SWINDLE—BEE-LARVÆ.

To Mr. Stachelhausen: The word "swindle" was not used in its offensive sense. It shall be recalled—although it was not, I think, used in such a way as to lead to bad opinions, either of that method of rearing queens or of the practitioner. Page 356.

And so we're all growing older (no possible swindle about that) and as the bee-larva grows old the nurse grows old, too, and a suitable modification of the kind of food comes very naturally. Quite likely there is something in that, and a something most of us had not thought of. Would not apply so well when the nurse, after having reared one set of charges, begins again. Page 359.

FEEDING GRANULATED HONEY.

In feeding candied honey as directed by A. C. F. Bartz, on page 360, the greatly diverse character of candied honey must not be lost sight of. Some is sharply granular, and some has scarcely a trace of a granule—and all grades between. The granular sorts, bees are much inclined to kick around and waste. Presumably Bartz's method would go nicely with the non-granular sort of honey. Page 360.

BRILLIANTS FOR BRILLIANT BEE-FOLKS.

A lamp-pendant hung to one's hat for bees to aim their stings at! And sure the public will think we are chickens, and that the dingles are to scare hawks away! Still, let some of the boys and girls try it and report. Brilliants, I believe they call those things. If you happen to be more brilliant than the brilliant, why, then, we must conclude your experiment inconclusive. Page 366.

VENTILATING HIVES FOR MOVING.

Ventilating for journey by lifting the cover a little crack but not quite enough to let the bees out—how about that? Might do for a few hives, new and perfectly true. With such hives as a good many of us have the "critters" would get out at twists and blemish spots, I fear. Ventilation through wire, and every opening just as tight as you can possibly get it, is likely to remain the orthodox way. Page 371.

HABIT AND HOLDING THE SMOKER.

And Ernest says, "Thumbs up—next the fire." A burn on one of the fingers that writes this testifies that I am one of the t'other ways. That does not prove that the t'other way is the better way. Never gave the matter much thought. It would not be surprising if the exact best way depended on the make or shape of the individual smoker. And if I'm wrong will the advantage of being right pay for the trouble of breaking a settled habit which is likely to prove stubborn? Page 372.

ORGANIZING TO CONTROL SALES AND PRICES.

Mr. Hutchinson's reasoning, as to the necessity of organization to control sales and prices, seems to be crushing. Hardly feel like talking back to it. But still my independent heart within me pleads that I absolutely won't go in myself. 'Spects there's more of us. Page 373.

FORCIBLE WORDS ON REARING QUEENS.

Those are very strong and forcible words of Mr. Alley's on page 375. "Natural for bees to rear queens when they have no queen; but very unnatural to rear them (except at swarming-time) when there is a queen in the hive." And he gives us his testimony for what it is worth, that queens reared out of swarming season over an excluder are poor, with very rare exceptions.

DESERTION OF FORCED SWARMS.

The man who for eight years has made from 100 to 200 forced swarms every year is the one we want to hear from. And he finds desertion next day one of the greatest drawbacks. I note with interest that colonies intending to swarm next day or soon, desert much worse. That's kind of an ugly point. The colony that inclines to swarm next day is just the one we need to attend to.

That 40 pounds of honey put below when a full set of drawn combs is used—Mr. Davenport speaks as if that was a crusher. Will it not go upstairs, the most of it, when the brood-nest expands? It seems to me that it will. Possibly the particular strain of bees one keeps makes a material difference at this important spot. Page 374.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

It Is Foul Brood?

I have had 2 colonies in my apiary in common boxes. About May they acted as if they had foul brood. Still, in June they both put out a good swarm. A great many bees may be found around on the ground. What can be the trouble?
CALIFORNIA.

ANSWER.—It is impossible to tell from the data given. It may be paralysis, and it may be something else. It would be well for you to send to the American Bee Journal for Dr. Howard's book on foul brood, and inform yourself thoroughly so as to tell whether foul brood is present. They might swarm in spite of foul brood.

Increasing and Improving Stock.

I am a small bee-keeper and want to increase and improve my stock. I bought some queens and made nuclei. I took three frames of bees with the frames ½ or ⅔ full of sealed brood and introduced the queens. I made it all right except they weakened down. I should like to know how to remedy this. I followed "A B C of Bee-Culture."

1. How can I keep them strong enough?

2. How shall I build up those I have made? I have my fine queens in them, but they are very weak.

3. I got one of the old queens in the new hive through mistake. Can I put her back, or will I have to introduce her back?
ARKANSAS.

ANSWERS.—1. If there were bees enough to care for the brood, you will probably find that as soon as the brood has time to hatch out they will be strong enough to build up. The trouble probably was that in starting the nuclei you took brood and bees from a colony having a laying queen, and took no precaution to make the bees stay, and so a large part went back to the old hive. You should fasten in the bees for a day or two, and then so many will not return. Neither will so many return if you make the colony queenless two or three days before taking away the bees.

2. Give them each a frame of sealed brood, and when enough bees hatch out to care for it, give more.

3. If there is no young queen yet reared in the hive, she can probably be put back with no other precaution but to destroy the queen-cells. If, however, a young queen has been reared, you must remove her and introduce the old queen.

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We have arranged with several of the best queen-breeders to supply us during 1903 with **The Very Best Untested Italian Queens** that they can possibly rear—well worth $1.00 each. We want every one of our present regular subscribers to have at least one of these Queens. And we propose to make it easy for you to get one or more of them.

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We prefer to use all of these Queens as premiums for getting new subscribers. But if any one wishes to purchase them aside from the Bee Journal subscription, the prices are as follows: One Queen, 75c.; 3 Queens, $2.10; 6 Queens for $4.00.

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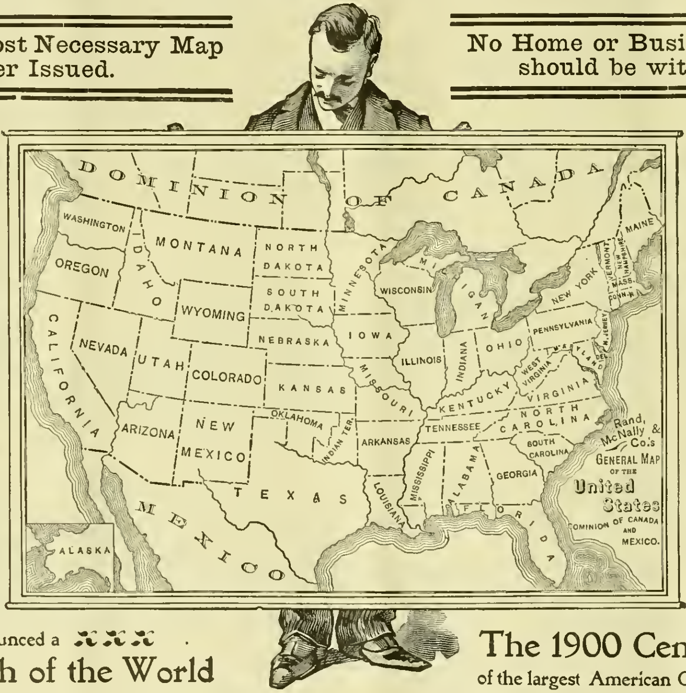
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are works of art. The engraving is plain, bold, and decisive. The color work is elegantly contrasted, but not gaudy.

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a salient feature of this map not approached by any similar publication.

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The 1900 Census ✠✠

of the largest American Cities is given.

One side shows a grand map of our great country, with **counties**, railroads, towns, rivers, etc., correctly located. The other side shows an equally good map of the world. Statistics on the population, cities, capitals, rivers, mountains, products, business, etc., a veritable photograph of the UNITED STATES AND WORLD.

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We have some of the seed of that famous honey-producing plant—Catnip. It should be scattered in all waste-places for the bees. Price, postpaid, 15 cents per ounce; or 2 ounces mailed FREE to a regular subscriber for sending us one NEW subscriber to the Bee Journal for one year, with $1.00; or for $1.20 we will send the Bee Journal one year and 2 ounces of Catnip seed to any one.

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FROM MANY FIELDS

White Clover a Big Crop.

My bees are doing well. White clover is a big crop here, and so is basswood bloom. I have 81 colonies, old and new, and it makes me a lot of work. ELISHA BAILEY.

Erie Co., N. Y., July 20.

Working on Red Clover Leaves.

For about ten days my bees have been bringing in honey from the second crop of red clover; now this is nothing remarkable, for I have seen them doing so for more than 20 years past; but recently, passing through a field of clover in bloom, I stopped to watch them and to my surprise I found them working not on the blossoms *but on the leaves*. This, I confess, I had never seen before. On closer examination I found the clover leaves covered with small plant-lice, and the under leaves covered with honey-dew (so-called), very similar to that found frequently on the leaves of the hickory, oak and other trees, though the honey is not so dark colored as from the leaves of trees.

Now this is something new to me. Have any of the readers of the American Bee Journal observed the same? Not one bee was working on the blossoms, and will not, I suppose, as long as the secretion continues, as it is more abundant and more easily obtained.

E. T. FLANAGAN.

St. Clair Co., Ill., July 15.

Relies on the Buckwheat.

The weather is, and has been, very unfavorable here throughout the season, and it is a wonder to me that our bees have done as well as they have. We will have a little honey, anyhow, but I rely more on the buckwheat than on anything else for surplus and winter stores. FRIEDEMANN GREINER.

Ontario Co., N. Y., July 15.

White Mulberries for Bees.

Having mentioned the subject of white mulberries in previous numbers of the American Bee Journal, I wish briefly to reiterate my confidence in the fruit as a remarkable honey-producing bee-food. My third year's practical observation more strongly convinces me of its great utility. Those who do not avail themselves of the hints before given regarding this very valuable tree stand greatly in their light. Suspicion of personal gain—that there must be a "colored artist" in the

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melon-patch—has, no doubt, deterred worthy but timid bee-keepers from making the experiment. Again I would like to assure them I have no white mulberry trees to sell (or any other sort), and in this instance, at least, have not the least selfish scheme to promote. But, having stumbled on a really good thing I would like others to enjoy the certain benefits that cannot fail to result in planting a hundred or more trees as a sure honey-producing supply. Last year I sent out some cuttings to some 50 applicants. I promised one and in each case sent three cuttings to make sure—simply on receipt of postage—with the expressed desire that the recipients write me results, that if not successful I might mail them a young rooted plant, which I was raising from the seeds purposely to present them. How many heeded my request? Not one! It has settled my enthusiasm; I offer nothing more—plants or cuttings.

I am glad to have had some bee-keepers come, talk and inspect the facts. A Mr. Owen and his son were over during the full fruitage of the tree—the only bearing one I have.

My bees are doing splendidly. I am feeding them crushed white mulberries every day, besides their natural forage. I have taken off some fine honey and expect considerable more in early fall. The ripening berries will last another week or two—generally for five weeks during the season, in which time, if fed plentifully to the bees, tangible results are certain to follow.

Probably here endeth the last chapter of Peiro's Epistle to bee-keepers concerning the white mulberry as a honey-provender. Selah.

F. L. Peiro, M. D.

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Under all circumstances, the Italian probably comes as near being the "all-purpose" bees as does any variety. The Italians are amiable in disposition, and very industrious, but they have their limitations.

The Italians are not as good comb-builders as the black or German bees; they dislike to store their honey far from the brood-nest, and are inclined to fill the cells so full of honey as

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Daughters of Select Imported Italian, Select long-tongued (Moore's), and Select, Straight 5-band Queens. Bred 3¼ miles apart, and mated to select drones. No bees owned within 2½ miles; none impure within 3, and but few within 5 miles. No disease. 30 years' experience. WARRANTED QUEENS, 60 cents each; TESTED, $1.25 each. Discount on large orders.

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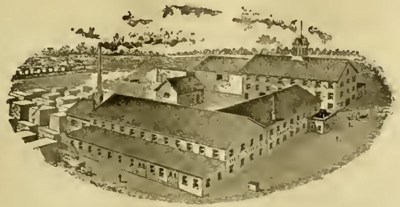

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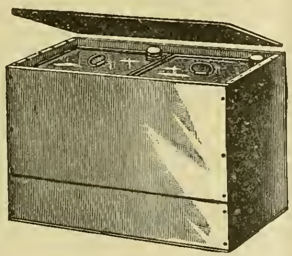

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Order the Above Honey and then Sell It.

We would suggest that those bee-keepers who did not produce enough honey for their home demand this year, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere.

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Stock which cannot be excelled. Each variety bred in separate apiaries, from selected mothers; have proven their qualities as great honey-gatherers.

Golden Italians Have no superior, and few equals. Untested, 75 cents; 6 for $4.00.
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to give the sealed combs a darker appearance than that capped by the blacks, the latter leaving a little air-space between the capping and the honey, thus giving the combs a snowy-white appearance. The blacks are good workers when the harvest is abundant and near at hand, but lack the staying qualities of the Italians when nectar must be searched for far and wide. For the production of extracted honey (that thrown from the combs by centrifugal force, the combs being returned to be refilled) the Italians are the ideal bees, unless it may be in the warmer countries, as in Cuba, where the honey-flow comes in winter, and as the Italians are apt to slack up in breeding as the season advances, the approach of winter finds the colonies too weak in numbers to take advantage of the harvest.—W. Z. HUTCHINSON, in Country Life in America.

Don't Invite Trouble.

Some bee-keepers imagine that because the National Association has always been triumphant when there has been an effort to drive some member, or his bees, outside the corporation, they can keep bees in almost any way in almost any situation. I am glad to see that Manager France does not propose to defend every member whose bees are declared a nuisance, regardless of whether they are a nuisance or not. All bee-keepers well know that a large apiary might be so managed as to become a terrible nuisance to near neighbors in a city or village. I investigated a case last year in which the bee-keeper was decidedly to blame. He even went so far as to stir up his hybrids purposely, on hot afternoons, that he might hoot and jeer at his neighbor when they had to "cut for the house." Then he boasted that he belonged to the National Association, a thousand strong, which would stand by him. It stood by him by advising him to move his bees out of the village. Of course, this is an extreme case; but we all know that, even with the best of management, bees will sometimes prove an annoyance, if not a nuisance.—Editorial in the Bee-Keepers' Review.

Feeding Back Extracted Honey.

Feeding back extracted honey in order that comb honey may be obtained is something that has been tried by very many of our best apiarists, and still remains, if I am right, an unsolved problem with some of those who have tried it. Some have reported success and others a failure; but if I am right again, and I think I am from what I have read and heard, those who consider it a failure, to a greater or less extent, far outnumber those who consider it a success.

From my experience in the matter I feel like saying that, if any one must feed extracted honey to his bees in order that comb honey may be produced, it could be better fed in the spring, in order to hasten brood-rearing, thus securing multitudes of bees in time for the honey harvest; then by putting on the sections in the right time, a large crop of comb honey may be secured if the flowers do not fail to bloom or secrete nectar.

My experience led me to believe that it is better to secure the honey in the sections in the first place, rather than have it stored in frames of comb, and then thrown out with the extractor that we and the bees may go through with much labor and stickiness to secure the same thing which might have been secured without all this trouble.

The practice of feeding back is on the principle of producing two crops in order to secure one, and it seems strange to me that any one would argue that such a course would pay in the long run. Even under the most favorable circumstances, such as having the bees finish nearly completed sections of honey, I could not make it more than barely pay, if I counted my time what it was worth to me in other ways. At the close of certain seasons, when I would have a large number of unfinished sections, many of which were so nearly finished that a few ounces of honey would apparently finish them, it seemed that it might pay to feed a little extracted honey to finish such; but after a careful trial of the matter, covering a period of some fifteen years, I finally gave it up as not being a paying investment, even in such cases, to say nothing about extracting with the view of feeding the honey for the bees to fill sections with from start to finish.

It is generally conceded that the best results can be obtained by feeding the extracted honey right at the close of the early white-honey harvest, so that the bees are kept active.

It is generally thought best, I believe, to take away all frames except those which are quite well filled with young brood, when preparing the colony for feeding back, using dummies in their places; but if all the combs are filled with sealed honey, except those which the brood occupies, these combs of honey will answer as well as dummies, so far as I can see. You might try both ways, and then you could tell which you like best, should the thing prove a success in your hands.

I think all agree that this honey should be thinned to the consistency of raw nectar, if not a little more, by adding the necessary amount of warm water.

Only the amount needed for feeding at one time should be thinned, or two feedings might possibly answer; for if the thinned honey is allowed to stand long in warm weather it is quite liable to sour and spoil.

Almost any way of feeding will do. I set an empty hive at the rear of the one being fed, making a communication between the two at the bottom so the bees could come in where the feed was. In this empty hive I placed division-board feeders to a sufficient number to hold 25 pounds of the thinned honey. This whole 25 pounds would be carried out of the feeders the first day, and usually nearly the same amount the second 24 hours, but later

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Long Tongues Valuable
South as well as North.

How Moore's strain of Italians roll in the honey down in Texas.

HUTTO, TEX., Nov. 19, 1902.

J. P. MOORE.—Dear Sir:—I wish to write you in regard to queens purchased of you. I could have written sooner, but I wanted to test them thoroughly and see if they had those remarkable qualities of a three-banded Italian bee. I must confess to you I am more surprised every day as I watch them. They simply "roll the honey in." It seems that they get honey where others are idle or trying to rob; and for gentleness of handling, I have never seen the like. Friend E. R. Root was right when he said your bees have the longest tongues; for they get honey where others fail. I will express my thanks for such queens. I am more than pleased. I will stock my out-apiaries next spring with your queens.

Yours truly, HENRY SCHMIOT.

The above is pretty strong evidence that red clover is not the only plant which requires long-tongue bees to secure the greatest quantity of nectar.

Daughters of my 23-100 breeder, the prize-winner, and other choice breeders: Untested, 75 cents each; six, $4.00; dozen, $7.50. Select untested, $1.00 each; six, $5.00; dozen, $9.00. Safe arrival and satisfaction guaranteed. Circular free. I am filling all orders by return mail, and shall probably be able to do so till the close of the season.

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on they would not carry so fast, when only what they would nearly clean up each day would be fed, as the thinned feed is liable to sour in the feeders, if the bees are several days in taking it out.

This fed-back honey is far more likely to candy or become hard in the comb than that put in the comb at the time it is gathered from the fields.

When first taken from the hive it looks very nice and attractive; but when cool weather comes on in the fall it assumes a dull, unattractive appearance, thus showing that the honey has hardened in the cells; while comb honey produced in the ordinary way is still liquid, and will keep so from one to three months after the fed-back article has become so hard as to become almost unsalable.—G. M. Doolittle, in Gleanings in Bee-Culture.

Close Saturdays at 1 p.m.—Our customers and friends will kindly remember that beginning with July 1, for three months we will close our office and bee-supply store at 1 p.m. on Saturdays. This is our usual custom. Nearly all other firms here begin the Saturday afternoon closing with May 1st, but we keep open two months later on account of the local bee-keepers who find it more convenient to call Saturday afternoons for bee-supplies.

National Convention Notice.

The 34th Annual Convention of the National Bee-Keepers' Association will be held in Los Angeles, Calif., on August 18, 19, and 20, 1903, in Blanchard's Hall, at 235 S. Broadway. The headquarters of the Association during the convention will be at the Natick House, corner of First and Main Streets.

It is expected that this will be the largest and best convention ever held by the bee-keepers of America. Every one interested in the production of honey should be present, if at all possible. Besides the question-box, which will be one of the special features of the program, the following subjects will be discussed in papers by the prominent bee-keepers mentioned. Afterward a free and full discussion will be had by all in attendance who wish to participate. The subjects and men to introduce them are as follows:

"Honey Exchanges and Co-operation Among Bee-Keepers" by Prof. A. J. Cook, Claremont, Calif.

"How to Make Money Producing Extracted Honey," by J. F. McIntyre, Sespe, Calif. Response by E. S. Lovesy, Salt Lake City, Utah.

"The Production and Sale of Chunk Honey," by Homer H. Hyde, Floresville, Texas. Response by C. P. Dadant, Hamilton, Ill.

"The Eradication of Foul Brood," by N. E. France, Platteville, Wis.

"Reminiscences of Bee-Keeping and Bee-Keepers in the Early Days," by A. I. Root.

There will be reports by the officers, which include Pres. Hutchinson, General Manager France, and Secretary York.

The California bee-keepers are planning to give all in attendance one of the grandest receptions imaginable on the first evening, Tuesday, Aug. 18. No one will want to miss this feature of the convention.

It is an opportunity of a lifetime to take the trip to California, as all convention members can avail themselves of the low railroad rates, as it comes at the time of the Grand Army meeting in San Francisco, and the same rates apply to Los Angeles.

For further information or particulars that may be desired, address the Secretary, 144 E. Erie St., Chicago, Ill.

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Dear Sir:—I thought I would let you know as to results of the nucleus sent me. They were placed in 10-frame hives and now they are in fine condition. From one I removed 24 pounds of honey and had to give 6 of them more room, as they were hanging out. They have more than reached my expectations.
Yours respectfully, E. K. MEREDITH.

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HONEY AND BEESWAX
MARKET QUOTATIONS

CHICAGO, July 20.—Some consignments of the crop of 1903 are offered on this market, the comb in the majority of cases No. 1 to fancy, and the quality of the very best. It is many years since this neighborhood yielded in quality and quantity as now. Demand has not come for it at the present moment, but will within a short time, as it is being told that an abundant harvest of fancy honey is upon us. Prices asked are from 13@15c per pound. Extracted sells slowly at 6@7c for fancy white, 5@6c for amber. Beeswax, 30c per pound.
R. A. BURNETT & CO.

KANSAS CITY, June 30—No comb honey in this market. New white comb would sell for $3.50 to $3 75 for 24-section cases; amber, $3.25 to $3.50. There is considerable extracted honey on the market with scarcely any demand. Price nominal at 5½@6½c per pound. Beeswax in demand at 25@30c. C. C. CLEMONS & CO.

ALBANY, N. Y., July 18.—We are receiving some shipments of new comb honey, mostly from the South; the demand light as yet; we are holding at 15@16c. Extracted slow at 6@7c. The crop of honey in this vicinity is very light, and we shall have to depend upon other sections more than ever for our supply of honey. Beeswax, 30@32c. H. R. WRIGHT.

CINCINNATI, June 1.—Very little change in market from last report. We quote amber extracted grades at 5½@6½c in barrels; white clover, 8@9c; supply equal to demand. Comb honey, 15@16c for fancy. Beeswax, 30c.
THE FRED W. MUTH CO

NEW YORK, July 8.—Some new crop comb honey now arriving from Florida and the South, and fancy stock is in fair demand at 14c per pound, and 12@13c for No. 1, with no demand whatever for dark grades.

The market on extracted honey is in a very unsettled condition, with prices ranging from 5@5½c for light amber, 5½@6½c for white, and the common Southern at from 50@55c per gallon. Beeswax steady at from 30@31c.
HILDRETH & SEGELKEN.

CINCINNATI, July 20.—The demand for honey continues slow. New extracted and comb begins to be offered largely. Prices show a downward tendency. Extracted sells at the following prices: Amber in barrels, 5@5½c; alfalfa, 6½c; white clover, 7@7½c. Comb honey, fancy water-white, will bring 14@15c; no demand for lower grades. Beeswax, 27@30c.
C. H. W. WEBER.

WANTED! Extracted Honey.
Send sample and best price delivered here; also Fancy Comb wanted in no-drip cases.
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WANTED—Comb Honey in quantity lots. We are perhaps the only dealers in this article owning as much as 150,000 pounds at one time. Please state quantity, quality and price asked for your offerings. Thos. C. Stanley & Son,
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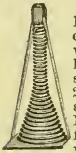

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Nat'l Bee-Keepers' Convention at Los Angeles, Aug. 18-20

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43d Year. CHICAGO, ILL., AUG. 6, 1903. No. 32.

WEEKLY

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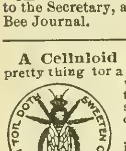
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Editorial Comments

The Los Angeles National Convention—Aug. 18, 19 and 20. We suppose a great many bee-keepers, especially all over the Western part of the country, are getting ready to go. It will be a wonderful trip for those of us who live farther east. And those California folks are all ready to welcome the buzzing crowd.

It probably will be the regret of a lifetime to those who could go if they would try, and fail to make the effort. There is still room in the special bee-keepers' car going over the Santa Fe, and leaving Chicago the evening of Aug. 12. If you are going to join that company in the greatest trip a lot of bee-keepers ever took across the continent, let us know quick, and we will reserve a berth for you.

The round-trip rate from Chicago to Los Angeles is $50, and $6.00 extra for berth. For the Grand Canyon trip (where we will all spend Sunday, Aug. 16) the extra cost for carfare and berth is $8.50.

Since our last issue, the following have notified us that they will join the party leaving Chicago on Aug. 12 for Los Angeles:

N. E. France, of Grant Co., Wis.
Geo. S. Church, of Winnebago Co., Wis.
Mr. and Mrs. H. D. Tallady, of Emmett Co., Mich.

Time of Taking Off Sections.—Just when it is best to take off a super of sections is not an easy thing for the novice to decide, and indeed one of considerable experience may sometimes be puzzled about it. If one waits till every section in the super is fully sealed, some of the central sections will be sure to have the cappings darkened, and it is a question between unsealed sections at the outsides and darkened sections at the center.

It is better to be too early than too late, for a few unsealed cells will not hurt the sale as much as the darkening. Take off the super when the four sections at the corners are still incomplete, or even when the entire row on each side lacks a little of being finished. Then fill up a super with these unfinished sections, and return them to the bees to be finished. Do not fill the super entirely with sections that are filled, lacking only the sealing of a few cells, but let the outside sections be such as are only half filled or less. Indeed, it may be well that the four corner sections shall have only foundation in them. Then there will be no temptation to leave the super on till the central sections are darkened, and the outside sections will give a chance for some storing, being returned again for finishing.

Detecting Foul Brood.—On another page of this number will be found a very practical article on foul brood by R. L. Taylor, copied from the Bee-Keepers' Review, which is especially instructive in the matter of detecting the presence of the disease. Read it, whether you have any present interest in such things or not. No telling how soon you may need knowledge about such things, and need it badly.

A Good Cement for fastening the handles of knives, forks, and other things that have become loose, is said in the Australasian Bee-Keeper to be the following: Four parts of resin, one of beeswax, and one of brickdust, melted together.

The Use of Smoke on Bees.—A. J. Alden sends a clipping from Farm and Ranch containing this paragraph from Heddon's "Success in Bee Culture:"

> "Take the average colony of blacks or hybrids, have your smoker in good trim, blow smoke across the entrance, and if no honey-flow is on, into the entrance; then noiselessly pry up the cover and pour two or three good puffs of smoke into the top of the hive, when you can handle your frames rapidly. But half smoking such a colony will make perfect terrors. With the gentler bees less smoke is needed, but the method should be the same. This can be done quickly. Smoking the entrance starts the panic, and the smoke on top of the frames completes it, and also gains the complete surrender of the crossest hybrids."

Mr. Alden's comments, "This is a little different from the accepted rule: 'Never be rough with bees nor fight them.'"

There is really no conflict between the rule and Mr. Heddon's instructions. It will be noticed that he has in mind gentleness of movement, even when dealing with cross bees, for he says to pry up the cover *noiselessly*. Giving smoke may or may not be considered fighting them. No more smoke than is absolutely necessary should ever be used, but with cross bees it is much better to give enough in advance to make sure of subduing them, for once thoroughly aroused, it will take more smoke to control them than if a sufficient amount had been given at the start.

Judgment and no little experience is needed in the use of smoke. Some bees need little or none when conditions are favorable, the weather hot and honey coming in a flood. If a queen is to be found, an overdose of smoke will prevent finding, for when the bees get to running like a flock of sheep you may as well close the hive till another time. In this regard there is no difference in individual colonies. A very little disturbance will set some colonies on a stampede, while others with more disturbance will remain quietly on the combs.

Adding Supers Under or Over.—The practice followed by a large number has been, when giving additional supers, to put the empty super of sections under the others next to the brood-nest, except near the close of the honey-flow, when the empty super is put on top. This practice will probably continue, in spite of the claim by some that better results can be obtained by giving the empty super always on top, and never allowing a colony to have more than two supers at a time.

But there seems to be some tendency to depart from what has been the general practice with regard to the arrangement of the supers tiered up other than the empty one. That practice has been to have the oldest super at the top of the pile, the next in age immediately below the upper. Instead of the continuance of that practice it is likely to be reversed, the empty super being next to the brood-nest, the one next above it being the one nearest completion and so on. This will sooner secure the finishing of the super earliest given, while at the same time the empty super under it will prevent the darkening of the comb in the nearly completed sections.

Bee-Stings That We Do Not Like.—The following is an editorial from Gleanings in Bee-Culture by the younger Root:

> If there is any place over my whole body that I do not like to get a sting outside my face it is up my sleeve on my wrist. Ordinarily I never take any precaution about putting on cuffs or extra sleeves that are bee-tight; that is, fitting closely around the wrist. But last week when I went down to the yards (it was just after a rain) the bees were particularly cross. Two or three got up my sleeve and stung me on the wrist. I paid little attention to the matter, although I suffered

considerable pain. Examination showed that one of the stings was right in one of the blood-veins, and another near one of the nerve-centers. The next day the arm seemed to be lame, and what was strange, there were sympathetic pains in the other arm in exactly the same place as in the other. Hereafter I shall wear tight-fitting sleeves, or, better still, long sleeve gloves with the fingers cut off at the ends; and this reminds me that they are used by a very large number of practical bee-keepers. It behooves us all to be careful not to get any more stings than is absolutely necessary, for the effect of the accumulated poison may be serious in its effects in after years, as it was in the case of Langstroth and some others.

And, by the way, should these sleeves be treated with any preparation like linseed oil, paint, or any other substance to render them more sting-proof? We have been sending out for a couple of years special bee gloves that were soaked in linseed oil,but it always seemed to me that the oil would make the sleeve warm, causing undue perspiration to the parts protected. My own notion is that a sleeve made of heavy ducking, not treated at all, would be better than having something that would make the fabric stiff and unwieldy. We should like to get the opinion of our subscribers, as we are thinking of getting up a special bee glove, or sleeve, with the fingers cut off, for a very large class of bee-keepers who are looking for something of just this kind.

The elder Root, unless he has changed his mind, rather scouts at the idea of even wearing a veil. It may be a question whether our good friend, the younger Root, would ever have gone so far away from the traditions of his father as to contemplate the wearing of gloves if he had not been so reckless as to wear such loose wristbands as to allow the entrance of bees. There is no need of that for any purpose, and the ordinary wristband large enough to let the hand through is nothing less than an urgent invitation for bees to enter. And they are not slow to accept the invitation.

Farther than close-fitting wristbands, however, many of the veterans would object to any protection for the hands. The discomfort of wearing gloves on a hot day would to them be greater than that from a few stings that might be received during the course of a day in working with bees of reasonably decent temper.

If gloves must be worn, they are much better to have the tips of the fingers cut off, thus taking away the chief clumsiness of working with gloves. Some, however, especially among the sisters, would object to having even the tips of the fingers bare, their object in wearing gloves being hardly so much to avoid stings as propolis.

Automobiles for Out-Apiaries, in preference to horse-flesh, seem now to be possibilities in the not distant future. There is no question as to their advantage in one respect—they will never get frightened, run away and break things because attacked by cross bees. With horses there is always some anxiety in that regard. The main objection to the use of automobiles at present has relation to expense. Editor Root views that part of the subject hopefully. He says:

> Already the operating expense is far below that of a horse. We hear a great deal about expensive repairs, and they are expensive if one does not understand something of machinery. The process of simplifying the auto is going on all the time, and the repair item will grow less. Already there is a very good machine offered at retail for $275; quite a number at $550, and a host of them at $750. The cost of operating a gasoline-vehicle is about a half a cent a mile, of the run-about type. Figure up the mileage of your horse, cost of keeping, including the labor every day, or two or three times a day, whether you use it or not, and see where the figures are. When the automobile stops, the only expense is the interest on the investment, and repairs, and these last may or may not be a large item. It can lie idle six months. My auto is kept in a little room, and sometimes during bad weather it stands for days without any one going near it; and yet it is ready for me almost instantly when I am ready for that.
>
> The price of automobiles has dropped some $200 or $300, on run-abouts, this year, already. Millions of money are being poured into the industry. It will not be long before Yankee genius will be able to turn out a machine so cheaply that every one can have one who can afford a horse and buggy and a barn. No, throw the barn out of the account. But whether the automobile will be able to go over any roads that a horse and buggy can is doubtful. Good roads and automobiles *must* go hand in hand. There is no use in buying an automobile *unless* you can have better roads than where the mud is half-axle-deep.

"Queen-Right Colonies" is what F. Greiner, in the American Bee-Keeper, calls colonies that are all right as to having a laying queen. This is a useful innovation from the German language. The word "queenless" is used with regard to a colony that has no queen, but heretofore we have had no word for its opposite. The new word "queen-right" means more than the opposite of queenless, for if it merely means that it would include colonies with virgin queens or with drone-layers. But in one word it expresses the fact that a queen is present and that she is a normal laying queen.

To Stop Robbing, G. Small gives the following in the Australasian Bee-Keeper:

> At night close up the robbed hive seeing that there is a queen and a good supply of food, then let it remain for three days, open it at night again to let the bees have some fresh air or to feed them, but closing the hive again before the other bees are on the move; by this you keep out all "robbers" which will be seen flying round in dozens; with the hive being closed they find they cannot get in to plunder and kill, and will leave the hive entirely master of the field.
>
> This simple but effectual way has been tried by the writer with the robbing in all stages, and according to these stages the longer or shorter time you will require to keep the robbed hive shut up, in some cases three days, six days, or even ten or twelve days are required for treatment to prove successful.

Continued long enough, the plan ought to work well, with any colony having a good queen, but there would be sometimes danger of suffocation. It would be a good deal of trouble to open the hive every evening and then close it again for ten or twelve days, and it would for some be easier to put the colony for that length of time in a cool, dark cellar. But if the colony be thus moved, an empty hive should be put in its place, otherwise the robbers will make a severe assault upon a neighboring colony.

The Honey-Flow and Swarming in Illinois and adjacent States are somewhat unusual. The general rule is that when the bees get to storing heavily they give up swarming, but this year the heavy flow seems only to make them worse. Can any one tell why?

Swarms in Chimneys and Walls of houses are not confined to California this year. Throughout the white clover region of Wisconsin, Illinois, and Indiana, they are unusually common. One correspondent reports five in his vicinity.

Miscellaneous Items

A BEE-KEEPERS' PICNIC will be held by the Southeastern Minnesota Bee-Keepers' Association at Homer, on Aug. 25, 1903. All bee-keepers are invited to be present. It should be made a great day for all the bee-folks in that neighborhood.

THE SISTERS DEPARTMENT in this journal has the following kindly mention by Stenog in Gleanings in Bee-Culture:

> From a very modest beginning, Miss Emma Wilson has made her department, "Our Bee-Keeping Sisters," one of the best in the "Old Reliable." Miss Wilson's scholars ask a good many practical questions which are ably answered.

EUGENE SECOR, of Winnebago Co., Iowa, has an interesting article on "Some of the Benefits and Pleasures of Bee-Keeping," in the July 15th number of the Twentieth Century Farmer. The illustrated original heading used in connection with the article is very attractive indeed. All together it is an attractive as well as instructive contribution, and will doubtless incite many a reader of that excellent farm paper to investigate the habits and work of the busy bees.

MR. WILLIAM MCEVOY, foul brood inspector for Ontario, Canada, reports 220 colonies of bees, and hopes before long to increase his apiaries to 1000 colonies. He says he has secured the largest crop of honey this season he has ever had. The inspectorship has kept him from going as largely into bees as he would like to do. There are few as prominent bee-keepers in Canada as Mr. McEvoy. He certainly has done a great work for bee-keeping in the Province of Ontario.

Amerikanische Bienenzucht, by Hans Buschbauer, is a bee-keeper's handbook of 138 pages, which is just what our German friends will want. It is fully illustrated, and neatly bound in cloth. Price, postpaid, $1.00; or with the American Bee Journal one year—both for $1.75. Address all orders to this office.

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The Premiums offered this week are well worth working for. Look at them.

Contributed Articles

Finding Queens—Pollen in Extracting-Combs.

BY C. DAVENPORT.

THOSE who have read what I have written in the past know that for comb honey I use and prefer the black or German bee. And all who have handled black bees know that it is a hard and ofttimes impossible matter to find a queen in a populous colony without straining or running the whole force through zinc. I keep all laying queens clipped and generally go over the hives in the spring before the colonies get very strong. But last spring it was so very cold and unfavorable almost all the time that I disliked to open the hives or disturb the bees as much as would be necessary to find the queens. When I did start in at this work most of them were fairly strong, and as soon as I opened a hive and began to handle the frames the bees would begin to boil up over the sides of the hive or collect or hang in bunches on the bottom-bars of the frames, and it seemed impossible to find a queen without the use of zinc. I would attach entrance-guards to the hives, then shake all the bees on the ground in front, and after most of them had crawled through the zinc the queen could be found among the few outside. But for some reason this method did not work well this season. The bees seemed loth to crawl through the zinc and in some cases a large part of them would collect around or under the hives and stay there all night.

So I devised or studied up another plan by which a queen can be found so much quicker, that I am taking space to describe it. It may be old to some, but I do not remember ever seeing it described. And, no matter how strong a colony is, the queen can by this method be very quickly found; and the plan will, I have since found, work equally well with a swarm if it is for any reason desired to find their queen.

I took an empty hive-body and over the bottom tacked or nailed an all-zinc queen-excluding honey-board. A tight bottom was nailed on another empty hive-body and the outfit was complete.

The empty hive with the tight bottom was placed on the ground in front of a colony and over it I would place the other body on which the zinc was nailed. Now, if I have made myself understood, it will be seen that we have two empty hive-bodies with a sheet of zinc between the two, placed in front or beside a colony whose queen it is desired to find.

Taking out the first frame it is looked over for the queen and if she is not found the frame and adhering bees are hung or placed in the empty hive-bodies. This is repeated with all the frames unless the queen is found before. We will suppose, which is usually the case with me, she is not. If the colony is very strong and becomes much excited, a large number of bees will be running around on the bottom-board of the now empty hive and collected on the inside. The hive is now quickly picked up and set over the one containing the frames, a sharp blow on each side rolls what bees are adhering to it down among the frames, and if there are so many bees on the bottom-board that the queen might be among them without being easily discovered it is held over the frames and the bees jarred off among them.

The bottom-board and hive are now placed back on their stand. With the left hand one of the outside frames is raised up two or three inches, then with the closed right hand the top-bar is struck a sharp, quick blow near its center. One blow of the right kind usually clears a frame so that a queen can be readily seen if she still adheres to it. As fast as the frames are cleared of bees they are placed back in the hive proper, on which the cover is now placed.

When I thought about this plan I was afraid that the bees would, instead of crawling down through the zinc, crawl up over the side. But in practice the most of them go right down through the zinc so that the queen is readily seen.

After the queen was clipped I would let her run in at the entrance, and then dump the bees down in front and they would go in sooner, for, of course, with this method, they have no zinc to go through at the entrance.

A neighbor bee-keeper near swarming-time offered to make quite a wager with me that I could not by this plan find the queen in one of his strong colonies in five minutes. In a trifle less than three I had found and clipped her, placed the frames back in the hive and dumped the bees down in front. But in this case I did not look the frames over to find her. Some might, and in fact I had some fear that it might, injure laying queens when jarred down on a sheet of zinc in this manner, but out of over 150 so treated not one was injured or lost, and they went right on laying at their usual rate. By the entrance-guard plan, when a queen stayed out over night before being found and clipped, it would in some cases be a number of days before she would resume laying as well as before.

POLLEN IN EXTRACTING-COMBS.

During the last few years I have produced considerable extracted honey, and one great drawback about this branch of our pursuit that I have to contend with is pollen in the extracting-combs. Last spring I had about 500 full-depth combs that were filled nearly solid full of pollen. The method that has been described, of soaking such combs in water until the pollen can be thrown out with the extractor, is an utter failure, so far as such pollen as is gathered here is concerned. I gave the plan a most thorough trial last spring in all kinds of variations. Some combs I soaked for a short time, some for a few days, and some for over two weeks, but in no case, where the cells were full or nearly so, did it soften or loosen enough so that it could be thrown out with the extractor. Where there was but a small amount in a cell it would work all right. Some of these combs I soaked in water and put them through the extractor three times. Of course this removed some of it, but the larger part still remained in the combs, and I found that combs soaked in water soured and molded badly in spite of all I could do to dry them.

The plan of giving these combs containing bee-bread to the bees in order to have them use it up will not do here, because, as a rule, there is too much of it gathered all through the season. The only way I know of to overcome or get rid of this, as it might be called, surplus pollen is to shave or cut it out of the comb. I lay a comb down on a board that just fits inside the frame. Then with the extracting knife I cut or shave the comb, pollen, and all down to ⅓ or ¼ of its original thickness. These combs are then placed over strong colonies some time before the flow commences, and the bees will usually dig out and throw away what pollen is left before building out the comb again.

Southern Minnesota.

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A Protest Against Unripe Extracted Honey.

BY R. A. BURNETT.

IN a recent number Mr. A. I. Root, in one of his Home articles, spoke of a bee-keeper in Northern Michigan who sold her honey in a perfectly raw state to a confectioner, and that both the buyer and seller of said honey seemed to be well pleased with their operations. "The producer sold a much larger quantity of honey from each colony of bees by taking it out of the combs before it was sealed than if it had been sealed and allowed to ripen before extracting."

Now, if there is any one thing that is more injurious than another to the sale of extracted honey, it is unripe or improperly cured honey. I do not know that I have read anything in a long time which annoyed me more than the publicity given to that method of obtaining a large quantity of honey.

I have for many years sold honey to manufacturers; but where they got uncured honey it had the effect of reducing their consumption in the near future, as it did not give satisfaction in the product of which it was a component.

I will take the liberty of citing a most striking example of marketing honey in a green state. Certain bee-keepers in the main buckwheat sections of New York, in reecnt years, got immense returns from their bees by taking off the combs before the honey had been sealed, or very soon thereafter. Some of them were called "Lightning Operators." Their honey was sold on the reputation that buckwheat honey had made for itself, that of being a good article for baking purposes; but after two or three years of disappointment with buckwheat honey (that they got hold of) these manufacturers finally determined that they would use no more buckwheat honey, for of late it had been very unsatisfactory in many instances. The result is, that for the past two or three years these largest of consumers will not have anything to do with honey that has any symptom of buckwheat about it; and as its use for other purposes is very limited we have great difficulty in disposing of it; and when we do it is at a low price.

I am firmly of the opinion that, had it not been for the greed of these bee-keepers, buckwheat honey to-day would be in as great demand as it was ten and twenty years ago; for at that time it was considered one of the best kinds of honey for baking purposes.

Some mention has been made of late concerning Cuban honey, or the honey of the West Indies, which honey has also been largely used for baking. If these tactics of marketing the unripe product are followed they will soon bring the product of that section into such disrepute that honey from the islands will be shunned just as buckwheat is in the United States at present writing. Cook Co., Ill.

[Mr. Burnett is entirely right, and we (A. I. R. and myself) wish to endorse his protest from beginning to end. Mr. Root senior only meant to refer to what had been done by one bee-keeper in Michigan; but it is apparent the practice should be condemned just as vigorously as actual adulterating, for the one leads almost to as serious consequences as the other. It is well known to the writer that some bee-keepers in York State have been careless about putting out unripe buckwheat honey; they supposed that so long as it was used for manufacturing purposes no harm would result; but if they could see some of the protests I have seen, they would let the honey fully ripen in the combs before extracting. It is true that the market for York State buckwheat extracted has been injured almost beyond repair. In saying this I do not mean to imply that all buckwheat from that section has been unripe.—ED.]—Gleanings in Bee-Culture.

Foul Brood—How to Detect It, Hold It in Check, and Finally Get Rid of It With Slight Loss.

BY R. L. TAYLOR.

"IF you had an apiary of 200 colonies with cases of foul brood scattered through it, how would you manage throughout the entire season to get rid of the disease, or to keep it in check?" the editor asks me.

In the first place I would avoid, as far as possible, getting into a panic. Foul brood is bad enough, to be sure, and its cure entails considerable labor and loss, but it is, fortunately, not without a remedy. I should try to preserve my equanimity, and thoroughly mature plans for effecting a cure; for there must be no halting while taking any step in the operation.

CHARACTERISTICS OF THE DISEASE.

The first point that claims serious attention is the distinguishing of the diseased colonies from the healthy ones. This is a matter that is attended with more or less difficulty, at any season of the year, but with more at some seasons than others, except in cases where the disease has made considerable progress. In these cases, even one with no experience, need have no hesitancy in coming to a correct decision. All the ear-marks of the malady are but too evident: the weakness of the colony, listlessness of the bees, the repellent odor, the ragged cappings of the brood, the shapeless dead brood, and the general unprosperous appearance of the combs and the honey, make the diagnosis easy.

But if the colony be yet strong, and but slightly affected with the malady, the case is quite different. If it be in the fall, after breeding has ceased, or in the spring before it has begun, the bees, owing to the strength of the colony, have almost, if not entirely, removed the cappings from the diseased cells, the odor is faint, if not practically absent, and the colony appears prosperous, so that even the adept, on a hasty examination, is liable to be deceived; and one without experience is sure to be. The diagnosis of those of this sort is the most difficult of all, and the difficulty increases with the slightness of the affection. How, then, may the disease be discovered in such cases? Let us go to one of the colonies badly diseased, and take from the center of the brood-nest a comb—the newer it is the better—in which there has been brood during the past breeding season. Now, we will hold it in a good light, so that the light falls upon the comb not quite perpendicularly, but at an angle of 70 or 80 degress from the top of the comb; now we look down at an angle of about 40 degrees from the top of the comb into the cells, and what do we see? In many of the uncapped cells on their lower sides—not bottoms—we see brownish, not grayish black, scales nearly as wide as the cells, and reaching nearly to the opening of the cells. These scales are the remains of brood destroyed by foul brood.

We will spend a little time in looking at them to fix in our minds the image of their forms; will examine the other side of the comb, and even take out one or two more to look at. If the colony is weak, many of the affected cells retain a fraction, or the whole, of their cappings, but, in any case, there are many with no capping. If the colony has been afflicted with bowel trouble, one, on a careless examination, might take the scales to be dried excrement, once half liquid, but we look carefully and see that they are always in the same position, and of the same size and shape, which would not be the case if they were excrement.

We will now return to the colony but little affected, and take out and examine, one after another, the combs in which brood has been reared during the past season. Now we see the scales at a glance. There may be but half a dozen in some of the combs, and in some none at all. It is safe for us to pronounce the colony diseased, and to treat it accordingly, but this test is not quite so certain as one we shall be able to apply when brood-rearing has been under way for some time, and settled warm weather has come. I say it is not quite as certain, for the sole reason that in one or two cases I have known the scales of brood dead from other causes than foul brood, though, in those cases, I think the scales were all finally removed by the bees.

We will now go forward to apple-bloom, or to the opening of white clover. If the colonies we visited earlier have been left undisturbed, we will examine them again in the same order as before. Providing ourselves with some toothpicks, or bits of straw, we go to the sicker colony of the two for its thorough examination, and proceed with the greatest deliberation, for we are trying to learn to distinguish foul brood with absolute certainty. Having an eye out continually for the appearance of robbers, which must be taken as a signal for closing the hive, and postponing further examination, we raise the cover. If we are on the leeward side of the hive we may catch a faint whiff of the ill odor that proceeds from the diseased brood, as the cover is raised, but we make sure of it by bending over the hive with face near the top of the combs, but we do not unnecessarily prolong this part of the examination, for the scent is by no means pleasant—nor worse than that of colonies badly affected with diarrhea, perhaps; not so bad, but quite different—something like that of a poor quality of glue as it is warming for use, or like that of a dead animal after it has lain and decayed and dried for weeks in the open air. With a little practice we shall not be liable to mistake the odor, and we shall find it of considerable assistance in discovering the disease to the extent that often the necessity of lifting combs will be precluded.

Now, we will take out two or three combs from the center of the brood-nest, and look for the peculiarities in their appearance or contents. At the first glance, one who takes delight in seeing his bees prospering would have a feeling of depression come over him without realizing the reason for it. But we easily discover the reason. There is plainly a genera appearance of shiftlessness, slovenliness and squalor. The combs are too dark, and without the natural, clean look. The bees do not cling well to the brood, but slink away; the cappings of the brood do not have the pretty, clean, slightly convex appearance, but some are flat, or even concave; many are perforated, some slightly, others in a greater degree, and are more or less ragged.

Now we will look into the cells. Some, not capped, contain larvæ of a clear, pearly luster, others have nicely rounded cappings—all these are as yet healthy. In the cells with sunken, perforated and ragged cappings, and in many of those not capped at all, we see larvæ of a brownish color of various shades from slightly yellow sometimes to the prevailing hue of a dark, dirty brown. These are all dead. Did they die of foul brood? We can surely tell by trying them with our toothpicks. We open some of the sunken and the perforated cells and insert the sharp end of the toothpick into the remains of the larvæ the different cells contain. The skin of each one goes to pieces with a slight touch, and a slight turn converts it into a homogeneous, glue-like mass of the color of coffee when prepared with milk for drinking; and on withdrawing the toothpick the matter is drawn out in a string a half inch, more or less. It is foul brood, and the toothpick is the supreme test. There is no foul brood without viscidity, and no viscidity without foul brood.

NECESSITY FOR CAUTION WHEN EXAMINING INFECTED COLONIES.

The toothpick, as used, we must dispose of with care to prevent the contamination of healthy bees. We may burn them in the smoker; and it is an additional safeguard to have always at hand a dish containing a weak solution of carbolic acid in which to wash tools and hands before manipulating a colony that may prove to be healthy.

Now, we must go and examine the colony but slightly affected, for the detection of the disease in such a one requires some patience and care. On opening the hive, if we have a "good nose," we may, on applying it to the top of the combs just over the center of the brood-nest, possibly distinguish slightly the characteristic odor of foul brood, but very likely we may not be able to do so. We then remove combs from the center of the brood-nest. On a cursory view everything looks prosperous—the colony is strong, the brood is compact and abundant, and of a general normal appearance, and the bees are working energetically. But if we look carefully we may see here and there a cell the capping of which has lost its lively appearance. It is a little too dark, and is slightly flattened. We must have recourse to our toothpick. One breaks the suspicious capping. Yes, the larva is dead and discolored. The toothpick touches it with a slight turn and is withdrawn, bringing the stringy tell-tale matter with it. Other similar cells are found. There is no question but that it is foul brood.

HOW TO PREVENT THE DISSEMINATION OF THE DISEASE.

Now that it is established that foul brood has a foothold in the apiary we must make every effort to prevent its farther dissemination. It might be asked, Why not do that by curing all the diseased colonies? The reply is that the periods of time when that can be done quickly and safely are limited, both in number and extent. The temperature must be warm enough for comb-building, and security against robber-bees must be had for the necessary operations, so that a time of waiting of greater or less length is pretty sure to intervene, hence the necessity for taking precautionary measures. And first, and most important, is the guarding against robbing. We must make a weak colony secure against the possibility of being attacked. The weak colonies are the ones by far the most likely to be diseased, so we will make sure not only that the entrances are small enough for successful defence, but also that the bees have sufficient spirit to make the defence. We will sacrifice, without hesitation, any infected colony that will not fight.

WHAT MAY BE DONE WITH MEDICATED SYRUP.

If the character of the time is such that the bees will take syrup, this may be taken advantage of by feeding diseased colonies a quart or two of medicated syrup made by mixing one ounce of salicylic acid in sufficient alcohol to dissolve it, in about 25 quarts of a not too thick syrup or honey. This will be found very helpful; and we will not omit to avail ourselves of it as fast as the diseased colonies are discovered. I have found that this medicated food stops the spread of the disease in the hive, and, no doubt, on stronger grounds, prevents the spread of the contagion to other hives. If the time be early spring, as we find colonies which were badly diseased the previous fall, before giving the food we will remove from each some of the combs which contain the dead larvæ, and leave the bees only the ones which have few or none. These will prove sufficient until a cure can be effected; and the withdrawing of the combs with the greatest amount of affection will be a very decided advantage to the colony.

UNITING WEAK COLONIES.

We are now supposed to have critically examined the entire apiary, and distinguished each diseased colony by a prominent permanent mark, and to have given each a supply of medicated syrup. We will now keep each supplied with this syrup until the flowers yield fairly well. In attending to this we shall find some of the colonies that are taking but little or none of the food; these we will unite either with each other, or with others that are stronger, putting two or more together as rapidly as it can be safely done. I say safely done, because two colonies standing some distance apart among healthy colonies may not be brought close together at one movement, for that would be likely to send some of the bees into healthy colonies. They must be brought together gradually so that all the bees will be brought along. We will make the united colonies strong by putting a sufficient number together to make them so, for weak ones will prove to be of little if any value.

A CAUTION REGARDING THE USE OF COMBS FROM COLONIES THAT HAVE DIED.

There is one other preliminary matter that must be attended to, and that is the examination of the combs of colonies that have died during the winter. Diseased colonies are particularly liable to perish, and a larger proportion of the dead ones will no doubt be found to be of that class. The status of each is to be determined in the same manner that we determined the condition of the colonies examined for foul brood early in the spring before brood-rearing had made much progress; that is, by looking for the scale-like remains of the larvæ which perished the previous year.

It will be understood, of course, that all diseased combs, that is, all combs from diseased colonies, bits of comb and honey, must be kept at all times where no prying bee can by any chance get access to them. These are the readiest means of the spread of the disease. The honey may be extracted from combs, containing sufficient to make it worth while, boiled well for at least 15 minutes, then medicated and used for feeding; but unless one has conveniences for keeping all combs and honey safe, they should be burned up at once. However, with care, there is no good reason why the wax from the combs, and most of the honey, should not be saved. Every one must consider his own conditions to determine how he can best dispose of them without incurring risk.

GETTING RID OF THE DISEASE.

We now come to the final and indispensable operation for effecting a cure, and that consists simply in transferring the bees from their own combs to hives furnished with frames of foundation or frames with starters. I have not found it necessary to disinfect the hives containing diseased colonies, so, if found more convenient, the combs may be taken out, the bees brushed and shaken in front of the hive, and the hive furnished with frames of foundation.

AT WHAT SEASON TO DO THE WORK.

But at what time is this to be done, and what disposal is to be made of the brood?

The operation may be successfully performed at any time during warm weather, if only sufficient allowance of time is made to enable the bees to complete their combs before the cool weather of the fall comes on. May, June and July are the best months, and of these about the beginning of the white-clover flow would be the most favorable time of the year for beginning the work. This is so, both because it is the best time for the bees to build up without any care, as well as because it is the time when robber-bees are least likely to be troublesome.

At this timely season let us go into the apiary with the necessary hives, ready furnished, to undertake the work. We find many that were but slightly diseased strong and almost in condition to cast a natural swarm. Each one of this class is moved a little aside and one of the prepared hives is put in the place of each. Now, from each one take out the combs with the bees and shake the bees off in front of the new hive, making sure that the queen goes with them, until we have a driven swarm, leaving sufficient in the old hive to care for the brood. Now we have a driven swarm from each one, and the old hives with the brood. Within a week or ten days we will see that each of the latter has given it a good young queen, or a good ripe queen-cell, and in 21 days we will take away all the old combs and replace them with frames containing foundation or starters. This disposes of this class, and will surely effect a cure. It would be more than useless to give them another set of frames and another shaking out.

THE TREATMENT OF WEAK COLONIES.

Now we go back to the weaker class. These we will take in pairs. We first select the first pair, set one of them aside and put a new hive in its place and shake out the bees as in the former case, only get about all of the bees and the queen out. Now we put the old hive with the brood in the place of the other one of the pair, and bring that other one and shake out the bees and queen in like manner in front of the new hive, then take back the old hive and unite it with the one already on its stand; thus getting from the pair one new one with the bees and the two queens, and one united old one with the brood, that will be wanting a queen in a few days, and a new set of frames in three weeks, as in the former case. The rest are to be treated in like manner.

A good part of the success of this plan is owing to the medicated food given during all the forepart of the season. Without that the colonies would have been in comparatively poor condition, which would have entailed an increase of care and labor.

The cure may be effected during any part of the three months mentioned, or even in August, but the giving of medicated food must be resorted to unless the field is yielding an abundance for comb-building.

Sometimes the brood from several colonies may be given to a single one, and that one treated later.

Without feeding during a dearth, absconding is pretty sure to take place.—Bee-Keepers' Review.

Lapeer Co., Mich.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Don't be "Caught Napping" on Supplies.

I trust that none of the bee-keeping sisters have been caught napping without sufficient supplies. I have really felt sorry for the number of bee-keepers who have come to us this summer for sections and foundation, and we could not help them out.

An Experience with Bees.

I have been too busy to write. I have been cleaning out my hives and getting supers ready for use.

I commenced keeping bees four years ago. I bought 1 colony and hive, 2 supers, and sections enough to fill both supers twice, and got 48 sections capped and 10 partly filled. I cut out the queen-cells and did not let them swarm. In the fall I bought three colonies; one was weak and I had to feed it.

I put the four colonies in two small hives, and spread a piece of old carpet on each hive. They could go out and in when they chose.

When I went to take them out, in the spring, I found the weak colony dead, and one of the others almost dead. The weak one had frozen and the other had been too warm, as their hive was wet and mouldy.

I bought three colonies the next year, and I have let them increase two swarms in the three or four years, so I have 16 colonies now.

We have had a cold, wet spring, freezing fruit-blossoms, so I have had to feed the bees, but the alfalfa and sweet clover will soon be in bloom. I am keeping my bees strong by feeding, so they will be ready to work when there is a honey-flow.

I do most of the work with the bees, as my husband has enough to do on the farm. When I need help my husband or some of the children help me. I have six children, a boy 19, one 11, and one 8, one girl 17, one 15, and one 4.

We keep horses, cattle, hogs, turkeys and chickens, so there is always plenty of work for all. I have 70 chickens, and 30 young turkeys.

There has been a hail-storm that damaged the crops from 25 to 35 percent for about 10 or 15 miles square.

I subscribed for the Bee Journal when I bought my first colony. I could not get along without it.

I got 800 pounds of comb honey last year from 9 colonies, spring count. Mrs. Ben Ferguson.

Ford Co., Kans., June 1.

A Sister's Work in Colorado.

I think I might be called a bee-keeping sister, although on rather a small scale, as I have only 28 colonies of bees.

Eight years ago, on coming to this valley—Grand Valley, in western Colorado—my husband bought two colonies of bees and gave them to me to do as I might.

The first two or three years they increased very fast, but for the last three years they have nearly forgotten to swarm, and as I was very anxious to have more bees, last year (about the middle of May) I divided my colonies, making 37 out of 21, trusting to the bees to rear more queens, but only eight succeeded in rearing good queens.

My dividing them weakened them so much that they did not get built up so as to store any honey from the first cutting of alfalfa (and that was the strongest flow of honey for the season), but from about the middle of July until Sept. 20 they stored 59 cases of very nice honey.

I was very much discouraged about my bees building us so slowly after dividing them. I thought perhaps I had ruined the most of them. I made up my mind to inform myself a little better on bee-keeping so I asked one of my neighbors (an old bee-keeper), which bee-paper he thought would be the best for me to take. He recommended the American Bee Journal, which I subscribed for in October. I also got Cook's "Manual of the Apiary." I am very well pleased with the paper every week. When I get it, the first thing I do is to turn to the "Sisters" department.

I do all the work with my bees, put together the hives, supers and shipping-cases. I often wish that I had a hundred colonies; I think I could care for them all. I enjoy working with them so much.

This has been a cold, backward spring.

Perhaps later on I will tell you how I dress to protect myself while working with the bees. Alma Travis.

Mesa Co., Colo., May 27.

So your bees have almost forgotten how to swarm. My! I almost feel like envying you, Our bees have surely not forgotten, for they seem to think of nothing else, judging from the way they persist in trying to swarm. Shaken swarms, natural swarms—every thing swarms. All treatment and rules fail to prevent swarming this year. But with it all we are getting lots of honey, so we must take the bitter with the sweet, and we are surely thankful for the sweet.

Don't forget to tell us about that bee-dress later on.

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

MOIST HEAT IN QUEEN-REARING.

The matter of moist heat to rear queens in is one certainly worth grubbing over. Very likely queens reared in a dry atmosphere would fall short, as Arthur C. Miller intimates. But the humidity of the hive, although not entirely out of our control, is a little that way. Lots of bees, all carrying nectar, and lots of comb with nectar in the open cells, is the price of humidity. The humidity of a necleus will be pretty sure to vary with the outside weather, it seems to me. Queen-breeder might step in, but I don't believe he actually will. Page 381.

BEES MIXING VARIOUS NECTARS.

Sometimes—in hot, dry weather and very poor flow, basswood honey is almost too strong for even a lover of the basswood flavor to approve. As it is quite a blow to us to have to set catnip honey as unfit for any use, we kind o'want to hide in some similar refuge. Was not the yield poor at Mr. Crane's; and might not the honey be endurable another time? Slim outlook. Both the wet weather and the amount brought in seem to point right the other way. We'll play that those bees found something else much worse than catnip, and mixed the kinds. Anything that yields honey when the usual sources fail, and bees forage desperately everywhere, is liable to more or less of that kind of misjudgment. Page 382.

SAW ONLY PICTURE-SNAKES.

Of course that's not what the Editor saw the morning after the Fourth—those snakes on the title of No. 25. I can see bees in 'most everything, but fail to see 'em just at that spot. Not kicking, however. A bee-paper that is mostly something else is rather disgusting, but an occasional digression entirely off the field, I rather like.

GETTING PEOPLE TO USE HONEY.

Likely Mr. Whitney, as per page 287, and sound in the main. Mixing of syrups should be done at home, evidently. Interest in bees is not hard to stir up among people who have previously known nothing of them; and when stirred up it is a very lively interest, second cousin to bee-fever. At that point the local editor will publish things cheerfully—and sales will boom. But don't try to load down the latter fellow with matter manifestly of the free-advertising sort. If you hand him matter let it be instructive—just what the people, editor included, are wanting to hear. And, say! if you have worked this plan profitably, get a wedge in your own heart, and put in a small paid advertisement in the paper. Do this as a matter of right feelings all 'round, even if the ad can do no more than has already been done.

But common people won't buy a 12-cent sweet for their every-day pancake use. Either give that up or offer them extracted honey at 7 cents.

Shall Association money be used to advertise honey in the leading papers? I'm thinking the supply of money would run out before much result had been realized.

Of course our Editor is right, that the supply of honey would fall short if the whole people were enlightened and gently stirred on the subject. We have heard that many times, to be sure, but still we don't travel on it as much as we might.

ALFALFA COMING EAST.

Honey from alfalfa at Fond du Lac. Not a little merely, but honey by the thousand pounds. That's surely well to the north, and at least not a-west the great river. It's coming. "Spring! spring! spring! soon be here!" is what the little bird would say. Page 395.

THE SOLAR WAX-EXTRACTOR.

Yes, indeed, Mr. Doolittle putting into the solar extractor material that will absorb all its own wax when melted, and a lot more from surrounding stuff—well, the boy who does that the second time should call himself one of the flats. Page 398.

A LONG-CAGED QUEEN.

Perhaps I'm wrong, but my idea of the thing is that injury (if any) by suddenly compelling a laying queen to cease laying would all come in the first week. Twelve weeks no worse than six so far as the laying matter is concerned. As to the wearing grind of improvement there would be a good deal of difference; and twelve weeks of caging with the queen still unharmed is quite a record. Page 403.

ANOTHER TWIST ON THAT TWISTING COVER.

I see our mutual friend wants to prevent domestic hair-pulling by arbitrating the twisted cover. Hardly looks right to arbitrate the laws of mathematics—but I guess we may thank him for the main thing he called attention to. If the wood has a twisty disposition in its soul a cover rigidly cleated at both ends will still manage to twist some. The mathematical laws pertaining to a circle and its tangent do not apply when the ends are kept straight lines. Page 403.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Combs of Honey from Diseased Colonies.

What shall I do with 30 frames filled with honey, pollen and brood, taken from colonies affected with disease, probably black brood? MASS.

ANSWER.—I think I should try treating them with formalin.

Queen-Bees of the Brown or German Race.

Do you know where I can get a queen of the brown or German race, undoubtedly pure and purely mated?

ANSWER.—No, I don't. Fifty years ago they occupied the land as the common bee of the country, and in spite of all efforts to drive them out it is probably a hard thing to find a spot in all the country where traces of black blood may not be found in the vicinity now. But to find pure stock is another matter. Does any one know of any undoubtedly pure stock of the kind anywhere?

Getting Rid of Flies and Mosquitoes.

1. Please tell me what effect cobalt has on flies, and how to use it?
2. Is it offensive or dangerous?
3. What preparation is best to use?
4. What kind of plant will be offensive to mosquitoes? and is there any drug which, placed in the room, will drive them away, or prevent them from coming in.

MARYLAND.

ANSWER.—The only way I have seen colbalt used for flies was to sprinkle it on a plate and wet it with sweetened water. The flies would eat it and shortly die. It is a poison, and care should be taken not to allow children to get hold of it, but there is nothing offensive about it otherwise. I know of no particular preparation, just ask for cobalt.

I have some doubt whether there is any plant or drug that would keep the musquitoes out without being offensive to the occupants of the room.

Using a Division-Board or Not.

In my 8-frame hives, by crowding all together, there is a space at one side wide enough to put in a division-board. Now, in hot weather, would you keep in the board, or divide the distance up among the frames, with the board taken out? NEBRASKA.

ANSWER.—Keep the board there all the time. If you leave it out in hot weather, the bees will build out the combs so you cannot space them close again. Besides, there is no reason for given more space in summer, and that board or dummy is a good thing to make it easier for you to take out the frames. I wouldn't do without a dummy in each hive for a good deal of money.

An Experience in Transferring—Feeding Bees.

I have an apiary of about 90 colonies and have been handling bees three or four years for the pleasure I found in it. I commenced with box-gums, hollow logs, etc., but principally soap-boxes of all shapes and sizes. After getting the "A B C of Bee-Culture," Prof. Cook's and Langstroth Revised, Miller's "A Year Among the Bees," and having had the American Bee Journal to read for the past three years, I came to the conclusion that there was but one right way to handle bees—and with movable frames was the way. So my enthusiasm led me on to get a suitable hive and frames. I at last settled upon the 8-frame hive. And then came the task of transferring. Without asking any questions through the Bee Journal, I scanned all the back numbers and found what Dr. Miller had to say to the beginners on that subject, and put that with my own common sense and went to work.

In the first place, Dr. Miller says the best time is during fruit-bloom, when the combs are lightest; but here it was in July (the 4th), I was to undertake this intricate task, when the combs were supposed to be full. However, I thought I would try one colony, anyway, and if I make a success of it I might try some more. So I got ready by lighting the smoker, got a lot of string, a good knife and a table to work on. I followed Dr. Miller's plan pretty nearly through. I smoked the bees all in this hive and then lifted it off the stand, and then instead of having a "decoy" box I took the super off and used it for a "decoy," to catch the flying bees. I had to pry the box-hive open, as the bottoms were nailed hard and fast to the hive. When I got the bottom loose I turned the hive upside down and placed the forcing box over it and commenced drumming. Very soon I had the greater part of the bees up into it. Then I took the forcing box off and ran the remaining bees out by smoke into the super, now on the old stand. When all were out I removed the super and put the forcing-box on the bottom-board on the old stand and placed the super on top. Then I closed the entrance to a very small space to prevent suspicious robber-bees investigating what was going on. When all was through, and ready, I took the old hive to the honey-house some distance away to make the transfer of the combs. The old box-gun had only top-slats for frames, without side or bottom-bars, which left the comb hanging to the top-bar and to the sides of the hive. Generally what I transferred had tolerably straight combs for box-hives. I found very little honey in them, and, finding this the case, concluded that no better time could be to transfer than when the combs were the most free of honey.

So I then proceeded to cut out the combs, which were 12 inches long by 10 inches deep, and fastened them into standard Langstroth frames. The combs came very near fitting in width. I had to trim off a little of the bottom, which did not injure the combs in the least. After all were in I carried the hive carefully back to the old stand and lifted the old box and super off and put the new hive with the transferred combs on the stand, and right here my plan began to differ from Dr. Miller's. He says: Place the hive on the old stand and empty the bees out in front and let them run in. But I differ from him in this respect, for reasons which I shall give after I am through explaining my method of transferring. Instead of emptying them out in front of the hives I gently raise up the box, with the bees in it, and place it over the hive, and then brush them down gently, or otherwise; being filled with honey, they would remain quiet up in this box, no telling how long, and robber-bees would take possession below and on the outside of the entrance.

After I get the bees all brushed down and in the hive I either put the super over them or run the bees out of it down in the hive and take it (the super) to the honey-house to have its combs cut out, as I did the brood-chamber. Where I found the honey in the old super frames (14 inches by 4½ inches) too thick and crooked, and too full of honey to stand tying with strings, I just uncapped them and placed them above the brood-chamber with an empty super on and let the bees carry the honey down to the brood-chamber where it is needed. As I just remarked, I found but little. This placing these ugly super frames over the brood-chamber to be fed back to the bees can be done any time later on, and is better to be deferred for a few days in order to give the bees lately transferred time to stick their combs and get everything in good house-keeping shape.

Another reason for deferring it is, all this manipulating creates a great stir and excitement among the bees, and might cause robbing, and the more honey handled the greater the honey odor to attract their attention.

My reason for not emptying the bees out on a sheet to be run in as Dr. Miller directs is this: In their present condition, they being full of honey are sluggish, and already demoralized, and there being a great many young bees, many of them lately hatched out, this emptying them out would lose some of them, and other strange bees would be around investigating and secure a taste of honey, which would very soon start a first-class case of robbing.

The bees run in by Dr. Miller's plan would hardly resist the robber-bees, until they felt more at home, and had gotten more accustomed to the late changes of a new hive and a new bottom-board, and all the new house complete with their combs, all looking as if a cyclone had passed through them. But if gently brushed down they find themselves at home and seem to accept the change of things more readily.

My bees have gathered literally nothing since the first of June, as it has been raining every since, and I am preparing to go to feeding very soon; I shall have to give them back all the honey extracted up to the first of June.

I now wish to ask some questions that will not only interest me but may be of great advantage to other beginners. In regard to feeding them crooked and unshapely combs of sealed honey by placing the frames or combs just over the brood-frames and placing an empty super over them—

1. Will the bees carry the honey down and store it in the brood-chamber?

2. In case a super with these transferred frames of comb being on, and old combs of honey are placed on top of the super frames, will the bees store the honey in the super, or carry it down to the brood-chamber?

3. In case a temporary flow of honey comes on any time soon, and the bees having plenty of comb on hand, would the flow cause them to undertake building new comb, or would they use the old comb all up first to deposit their gathered nectar or honey fed to them?

4. Which do you consider in my case the best plan to feed the colonies I have that are short of stores, in order to carry them through the winter coming on?

5. When is the best time to feed, and how much at one time? How much in the aggregate to carry an ordinary colony through?

6. If bees are fed after a spell of rest with no nectar coming in for some time, will the feeding cause the queen to lay more vigorously and the bees to prepare more comb for the bees to lay in? Or, in other words, what effect does feeding have during such a spell? MISSISSIPPI.

ANSWERS.—1. Generally not at this time of the year; nor in general at any time unless the brood-chamber is quite empty of stores.

2. Most likely neither. If they move it at all, it will be into the brood-chamber.

3. They would first fill the old comb, unless too inconvenient of success.

4. and 5. Use Miller feeders or the crock-and-plate plan; feed granulated sugar and water, half and half, no need to heat it; feed large quantity as fast as the bees will take it till you have fed each about 22 pounds of sugar. Feeding such a large proportion of water gives the bees a chance to prepare the food more like their natural stores, but it must be fed early enough so they will have plenty of time to ripen it, perhaps in September in Mississippi. Of course you will figure a little on whether or not they will gather from any late sources.

6. If thin feed be given daily for some days, it will have a tendency to start laying, although late in the season it is difficult to start laying after it has stopped.

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FROM MANY FIELDS

Good Flow—Not Swarming Much.

We are having a very good honey-flow. I have two supers about full on most of my colonies, and they are hustling in the honey at a good pace, but are not swarming much.

Otero Co., Colo., July 17. W. J. MARTIN.

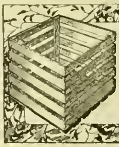
An Old Bee-Keeper.

I was born Oct. 20, 1833. I began to keep bees when I was 20 years old. I have seen queens go out and mate with drones two days following, and had drone-laying worker. I have bought Italian queens of Baldridge, R. P. Kidder, Quinby, L. L. Langstroth, Flanders, and Aaron Benedict; and I have reared scores of queens, but not any to sell. E. TUCKER.

Genesee Co., N. Y., July 20.

Sweet Clover Honey—Foul Brood.

Yesterday I took off a few sections of my first sweet clover honey. It tastes simply delicious—beats white clover "all holler." There are also some linden trees in the neighborhood and some catnip plants, and the combination of the three makes a honey which is —well, you ought to taste some of it; it is very thick, too. I probably won't get very



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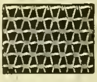

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—— HART BROS., Proprietors. ——

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HEADQUARTERS of the NATIONAL BEE-KEEPERS' ASSOCIATION during the Convention, Aug. 18, 19 and 20.

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SWEET CLOVER

And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5lb	10lb	25lb	50lb
Sweet Clover (white)....	$ .75	$1.40	$3.25	$6.00
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Prices subject to market changes.

Single pound 5 cents more than the 5-pound rate, and 10 cents extra for postage and sack.

Add 25 cents to your order, for cartage, if wanted by freight, or 10 cents per pound if wanted by mail.

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Italian Queens, Bees and Nuclei.

We have a strain of bees bred specially for honey-gathering and longevity, at the following prices:

One Untested Queen.....	$ .60
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One Select Tested Queen.	1.00
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One - Comb Nucleus (no Queen)................	1.00

These prices are for the remainder of the season.

Queens sent by return mail. Safe arrival guaranteed. For price on Doz. lots send for Catalog. **J. L. STRONG,**
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VIA SANTA FE ROUTE TO LOS ANGELES

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First Special Car via
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Wednesday, Aug. 12th, 10 p.m.
Arrive Grand Canyon
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.... Special Car ....
Friday, August 14th, 10 p.m.
Arrive Los Angeles
Tuesday, August 18th,
8 a.m.

Round Trip—Los Angeles, August 1st to 14th, Good until October 15th,
San Francisco, A Choice of Routes Returning.... **$50.00.**
Sleeper—Double Berth, $6.00.
Additional for Grand Canyon Side-Trip, $6.50. Sleeper, $2.00.

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much surplus honey this year, as I increased from 4 colonies to 16, and so my colonies are not very strong.

The other day I discovered foul brood in one of my colonies. It is not a very bad case as yet, and I hope it won't spread to the other colonies. I shall treat the colony next week. I also wrote to Mr. Smith, the foul brood inspector, to take a look at my bees when he comes up this way. CHAS. B. ACHARD.

Dupage Co., Ill., July 25.

Forced Swarms—Finding Queens.

I have been reading about forced swarming, by C. Davenport, on page 453, so I thought to give my experience.

I had 16 colonies, spring count, and not wanting to watch for swarms I undertook the shaking process. I waited till I found queen-cells started, then shook them on old combs in 8-frame hives. All but one of them stayed and went to work at once. The one that left I shook into a 10-frame hive on full sheets of foundation. Now, probably the reason that Mr. Davenport's bees left was they were shaken on foundation.

I wish to know if there is any sure way to find a queen. I have one colony that I want to change the queen. So I proceeded on a tour of inspection, took frames all out and looked them all over, and put them in another hive. No queen found. Well, not to be beaten, I went over them again very carefully. Still no queen. So I thought I could catch her by getting a queen-excluder, and proceeded to strain the bees through the excluder. Still my lady was invisible. Well, I put my thinking-cap on and thought a while.

You'll Never Regret
buying The PAGE for your fall fencing. It lasts.
PAGE WOVEN WIRE FENCE CO., Adrian. Mich.
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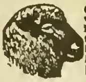

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Sections, Shipping-Cases, Honey-Cans,

And everything necessary for the bee-keeper. Prompt shipping. FINE ITALIAN QUEENS. Catalog free.

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The Emerson Binder

This Emerson stiff-board Binder with cloth back for the American Bee Journal we mail for but 60 cents; or we will send it with the Bee Journal for one year—both for only $1.40. It is a fine thing to preserve the copies of the Journal as fast as they are received. If you have this "Emerson" no further binding is necessary.

GEORGE W. YORK & CO.,
144 & 146 Erie Street, CHICAGO ILL.

Please mention Bee Journal when writing Advertisers.

I got an Alley queen-trap, fixed it on the entrance to another hive, drove the bees all through the trap into another hive, but the queen was not to be found. So I put them all back into their own hive, put them back on the old stand, and 3 or 4 days later found fresh eggs. So I suppose she has resumed business on the old stand. FRED TYLER.

Mason Co., Ill.

No Nectar in White Clover.

Mr. France must hustle, or white clover must secrete there. Here, with the greatest crop of white clover, bees do not touch it. Basswood is nothing. Alsike is all I received my honey from, till lately, sweet clover is coming on. The bees got just enough every day to build up well. The greatest year for swarming and the most runaway swarms in the history of the country. N. A. KLUCK.

Stephenson Co., Ill., July 16.

Producer's Name on Honey.

I wish a word or two about the producer's name on honey-packages. I hold that the producer has a perfect right to put his name and address on *every* package of honey sent out by him. On page 447 W. W. McNeal says:

"The producer who contends he is robbed of his rights when he is denied the privilege of ornamenting small honey-packages with his name and address, when such are not to

Italian Queens, by Mail.
Golden and Honey Queens.

July and August.	1	6	12
Honey Queens (Untested)..	$ .75	$ 4.00	$ 7.00
" " (Tested)....	1.25	7.00	13.00
Golden " (Untested)..	.75	4.00	7.00
" " (Tested)....	1.25	7.00	13 00
2-frame Nucleus (no queen)	2.00	11.00	21.00

Breeders, $3.00 each, after June 1.

Add price of any Queen wanted with Nucleus.

Our bees are shipped in light shipping-cases. Purchaser pays express on Nuclei.

Safe arrival guaranteed of all stock sent out.

BATAVIA, ILL., Aug. 21, 1901.

Dear Sir:—I thought I would let you know as to results of the nucleus sent me. They were placed in 10-frame hives and now they are in fine condition. From one I removed 24 pounds of honey and had to give 6 of them more room, as they were hanging out. They have more than reached my expectations.

Yours respectfully, E. K. MEREDITH.

DAVENPORT, IOWA, Dec. 31, 1901.

Your queens are fully up to standard. The honey queen that you sent my brother takes the lead. She had a rousing colony when put up for winter. The goldens can be handled without smoke or veil. Very truly yours,

JOHN THOEMING.

Notice.—No tested stock sent out before May 15. Send money by P. O. Money Order or Express Order. **D. J. BLOCHER,**

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Hives, Sections, Foundation,

etc. We can save you money. Send list of goods wanted and let us quote you prices. ROOT'S GOODS ONLY. Send for Catalog.

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DAIRYMEN ARE DELIGHTED to meet those who work for us. Cow keepers always have money. We start you in business. You make large profits. Easy work. We furnish capital. Send 10 cents for full line of samples and particulars.

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Business Queens,

Bred from best Italian honey-gathering stock, and reared in FULL COLONIES by best known methods. Guaranteed to be good Queens and free from disease. Untested, 75c each; 6, $4.00. Tested, $1.25 each.

CHAS. B. ALLEN.

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REMARKABLE

The Universal Satisfaction our QUEENS do give...

STERLING, GA., June 29, 1903.

I was showing my father yesterday how my bees, which I bought from you, were out-working everything in my apiary. Send me 4 Buckeye Red Clover and 2 Muth Strain Golden Italians. I will order more after next extracting. THOS. H. KINCADE.

Buckeye Strain Red Clover Queens. They roll in honey, while the ordinary starve.
Muth Strain Golden Italians—NONE SUPERIOR. ∴ **Carniolans**—NONE BETTER.

Untested, 75c each; 6 for ....$ 4.00
Select Untested, $1.00 each; 6 for 5.00
Tested, $1.50 each; 6 for ....$ 7.25
Select Tested, $2.50 each; 6 for 12.00
Best money can buy, $3.50 each.

Send for Catalog of **BEE-SUPPLIES**; complete line at manufacturer's prices.

The Fred W. Muth Co.,

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ADEL QUEENS.

One Queen	$1.00
Three Queens	2.75
Six Queens	5.00
Twelve Queens	9.00

Have reduced price of ...... **Improved Queen-Rearing** to 50 cents per copy. Book sent free to all who purchase three or more Queens.

Send for 25-page Catalog.

30Atf **HENRY ALLEY, Wenham, Mass.**

28 cents Cash paid for Beeswax.

This is a good time to send in your Beeswax. We are paying 28 cents a pound—CASH—for best yellow, upon its receipt, or 30 cents in trade. Impure wax not taken at any price. Address as follows, very plainly,

GEORGE W. YORK & CO., 144 & 146 Erie St., Chicago, Ill.

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This foundation is made by a process that produces the superior of any. It is the cleanest and purest. It has the brightest color and sweetest odor. It is the most transparent, because it has the thinnest base. It is tough and clear as crystal, and gives more sheets to the pound than any other make.

Working wax into Foundation for Cash a Specialty. Beeswax always wanted at highest price.

Catalog giving FULL LINE OF SUPPLIES with prices and samples, FREE on application.

E. GRAINGER & Co., Toronto, Ont., Sole Agents for Canada. **GUS. DITTMER, Augusta, Wis.**

Queens Now Ready to Supply by Return Mail

Stock which cannot be excelled. Each variety bred in separate apiaries, from selected mothers; have proven their qualities as great honey-gatherers.

Golden Italians Have no superior, and few equals. Untested, 75 cents; 6 for $4.00.

Red Clover Queens, which left all records behind in honey-gathering. Untested, $1.00; 6 for $5.00.

Carniolans—They are so highly recommended, being more gentle than all others. Untested, $1.00.

ROOT'S GOODS AT ROOT'S FACTORY PRICES.

C. H. W. WEBER, 2146-2148 Central Avenue, CINCINNATI, OHIO.
(Successor to Chas. F. Muth and A. Muth.)

be delivered to the consumer by himself, is laboring under a mistaken idea." I think Mr. McNeal, and Mr. York, and Mr. Anybody Else are wrong on that score. Did any of you ever know of a grocer who objected to the name and address of the manufacturer or producer of canned goods being on *every* can. Is not every barrel and can of syrup marked in this way? Is not all toilet soap marked with the name and address of the producer? Does not Mr. York advertise Root's goods? Why does he not advertise York's goods? Are they not as much his as the honey he buys? I sell all my honey direct to the consumer myself, with name and address on *every* package, and guarantee it to be O. K. in every respect.

I have 26 colonies of bees and run for both comb and extracted honey, and could sell a great deal more than I can produce. I got 10 cents per pound straight for it. Now, Mr. York, don't ask why I don't buy some of "York's Honey" and sell it. I expect it would have your name and address on it. But that is not the reason I don't buy. First, you don't have the same flavor and color of honey I produce. You know we Southern folks have foolish ideas. I can't sell light colored honey at any price, and I can't buy and pay freight charges, then sell for less than 15 cents per pound, which is out of the question here.

I hope Messrs. York and McNeal will not take any exceptions to what I have said. It is only my opinion on the subject.

My 26 colonies of bees are all in 8-frame dovetail hives, painted white. It was so cold in the spring we didn't get any honey, but we hope to get some from fall flowers.

Henry Co., Tenn., July 20. J. R. ADEN.

[It is all right to put your name on the packages of honey when you are retailing it yourself direct to the consumers. But when you sell it in bulk to a commission man or dealer, it is better to omit the producer's name.

We have no quarrel with any one who insists on putting his name on his honey when he sells it. Only he can't sell it to us. If any body else wants to buy it, that's all right. We have worked up a demand in Chicago for "York's Honey," and not for Aden's honey. We have spent a great deal of money in advertising "York's Honey" here, and have pushed it in many expensive ways that we have never written about. After doing all that, we are not quite such a whopping fool as to allow some one else's name to appear on any honey that we put on the retail market here among grocers.

We are not talking about extracted honey sold in bulk, such as 60-pound cans of it. We are speaking of section comb honey, and of extracted honey that we bottle and then

Long Tongues Valuable

South as well as North.

How Moore's strain of Italians roll in the honey down in Texas.

HUTTO, TEX., Nov. 19, 1902.

J. P. MOORE.—Dear Sir:—I wish to write you in regard to queens purchased of you. I could have written sooner, but I wanted to test them thoroughly and see if they had those remarkable qualities of a three-banded Italian bee. I must confess to you I am more surprised every day as I watch them. They simply "roll the honey in." It seems that they get honey where others are idle or trying to rob; and for gentleness of handling, I have never seen the like. Friend E. R. Root was right when he said your bees have the longest tongues; for they get honey where others fail. I will express my thanks for such queens. I am more than pleased. I will stock my out-apiaries next spring with your queens.

Yours truly, HENRY SCHMIDT.

The above is pretty strong evidence that red clover is not the only plant which requires long-tongue bees to secure the greatest quantity of nectar.

Daughters of my 23-100 breeder, the prize-winner, and other choice breeders: Untested, 75 cents each; six, $4.00; dozen, $7.50. Select untested, $1.00 each; six, $5.00; dozen, $9.00. Safe arrival and satisfaction guaranteed. Circular free. I am filling all orders by return mail, and shall probably be able to do so till the close of the season.

J. P. Moore, L. Box 1, Morgan, Ky.
31Atf Pendleton Co.

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A STANDARD-BRED
QUEEN-BEE FREE

To Our Regular Paid-in-Advance Subscribers.

We have arranged with several of the best queen-breeders to supply us during 1903 with **The Very Best Untested Italian Queens** that they can possibly rear—well worth $1.00 each. We want every one of our present regular subscribers to have at least one of these Queens. And we propose to make it easy for you to get one or more of them.

A QUEEN FREE FOR SENDING ONE NEW SUBSCRIBER.

In the first place, you must be a regular subscriber to the American Bee Journal, and your own subscription **must be paid at least 3 months in advance.** If it is not already paid up, you can send in the necessary amount to make it so when you order one of these fine Queens.

Send us $1.00 and the name (not your own) and address of **One NEW** subscriber for the American Bee Journal, and we will mail you one of the Queens free as a premium.

Now, go out among your bee-keeping neighbors and friends and invite them to subscribe for the old American Bee Journal. If you want some to show as samples, we will mail you, for the asking, as many copies of the American Bee Journal as you can use.

Should there be no other bee-keepers near you, and you desire one of these fine Queens any way, send us $1.50 and we will credit your subscription for one year and also mail you a Queen. Of course, it is understood that the amount sent will pay your subscription at least one year in advance of the present time. So, if your subscription is in arrears, be sure to send enough more than the $1.50 to pay all that is past due also.

We prefer to use all of these Queens as premiums for getting new subscribers. But if any one wishes to purchase them aside from the Bee Journal subscription, the prices are as follows:

One Queen, 75c.; 3 Queens, $2.10; 6 Queens for $4.00.

We are filling orders almost by return mail.

Now for the new subscribers that you will send us—and then the Queens that we will send you! Address,

GEORGE W. YORK & CO., 144-146 E. ERIE ST., CHICAGO, ILL.

label. We simply *know* we are *right* in our position in this matter so far as we are concerned. Others can do as they please with the honey they produce or handle. But any honey *we* put on the retail market must be "York's Honey," as we propose to stand back of every pound we put out.—EDITOR.]

Beedom Boiled Down

Getting Swarms Down from Tree-Tops.

Elsewhere I speak of the fact that we have been shinning up trees to get swarms. You may wonder why we did not pursue the good old orthodox plan of having the queen's wings clipped, or why the colonies had not been shaken, to stop all of this unnecessary climbing and chasing. In the first place, some of our customers object to having their nice queens clipped—don't like the looks of them. In the second place, the swarming weather caught us by surprise. We had about given up having any honey-flow, and the problem had been to keep our bees from starving. But the season opened up and the bees swarmed, and how should we get them out of our tall basswoods? No way under the sun but to climb after them.

We used a jack-knife to cut off the limb on which the swarm hung, then by carefully dodging among the limbs we climbed down to the ground as best we could, handing the swarm to an attendant as soon as he could be reached. But the jack-knife in cutting jarred the limb. I finally took down a big pair of pruning-shears, two big potato-sacks, and some stout string, supplying the boy who did the "shinning" with all these before he went up the tree. The shears were handy for clearing out a space through which to let the bees down. After reaching the swarm, the boy would proceed to slide the bag around the limb, and with the pruning-shears clip it off. He could then with his rope let down bees, limb, bag, and all, or he could climb down without danger of jarring the bees off, or without fear of being stung.

In descending through the tree, holding a limb from which a big swarm is hanging, one is liable to bump it against the foliage, dislodging many of the bees, filling the air full of them. These will in all probability alight on the limb nearest where they were first clustered, with the result that another climbing is necessary to get all the bees. The coffee-sack or bag saves all this trouble.

The pruning-shears are a vast improvement over the jack-knife. When the bees swarmed we had to hack away with this ever-present and usually convenient tool, but which, on occasions of this kind, was any thing but convenient or suitable.

I have been wondering if it would not be a good thing for those who do not clip the wings of their queens to have a special belt gotten up in which could be fastened a small short saw, a pair of strong pruning-shears, a smoker, a rope, and perhaps some other tool that might be necessary to complete the equipment.

The majority of bee-keepers believe, and believe rightly, that the *only way* to handle swarms is to do so by the clipped-wing plan. But something will happen, on account of which they will not get at the job, or perchance some queens will be skipped. In either case a swarm or two is liable to get to the top of a tree, and nothing but climbing after it will bring it to the earth again. I have seen the day many and many a time when an outfit of tools, with a pair of climbers already hitched to a belt, and ready to strap on, would be worth a good deal. There is nothing like being prepared for an emergency; and when one is in a hurry, the more convenient and handy his tools are, the more effective will be the work.—Editorial in Gleanings in Bee-Culture.

If you want the Bee-Book
That covers the whole Apicultural Field more completely than any other published, send $1.20 to
Prof. A. J. Cook, Claremont, Cal.,
—FOR HIS—
"Bee-Keeper's Guide."
Liberal Discounts to the Trade.
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Ready to fill orders for ITALIAN QUEENS from stock that for hardiness and good working-qualities is second to none. M.O. Office, Cleveland, Tenn.
CHESLEY PRESSWOOD,
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25 years the best.
Send for Circular.
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A Foster Stylographic PEN....

This pen consists of a **hard rubber** holder, tapering to a **round point**, and writes as smoothly as a lead-pencil. The **point** and **needle** of the pen are made of **platina**, alloyed with **iridium**—substances of great durability which are not affected by the action of any kind of ink.

They hold sufficient ink to write 10,000 words, and **do not leak or blot.**

As they make a line of **uniform width** at all times they are **unequaled for ruling purposes.**

Pens are furnished in neat paper boxes. Each pen is accompanied with full directions, filler and cleaner.

BEST MANIFOLDING PEN ON THE MARKET.

19,000 Postmasters use this kind of a pen. The Editor of the American Bee Journal uses the "Foster." You should have one also.

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Send TWO NEW SUBSCRIBERS to the American Bee Journal for one year, with $2.00; or send $1.90 for the Pen and your own subscription to the American Bee Journal for one year; or, for $1.00 we will mail the pen alone. Address,
GEORGE W. YORK & CO.
144 & 146 Erie St., Chicago, Ill.

Do It Quick!
$2.50 for $1.00
Sample Free
The Modern Farmer and Busy Bee, $50c;
The Western Fruit-Grower, 50c:
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Gleanings in Bee-Culture, $1.00;
ALL FOR $1.00
The Modern Farmer
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The Rural Californian
Tells all about Bees in California. The yields and Price of Honey; the Pasturage and Nectar-Producing Plants; the Bee-Ranches and how they are conducted. In fact the entire field is fully covered by an expert bee-man. Besides this the paper also tells you all about California Agriculture and Horticulture. $1.00 per year; 6 months, 50 cents. Sample copies, 10 cents.
THE RURAL CALIFORNIAN,
218 North Main Street, - LOS ANGELES, CAL.

$300,000,000.00 A YEAR and you may have part of it if you work for us. Uncle Sam's poultry product pays that sum. Send 10c for samples and particulars. We furnish capital to start you in business. Draper Publishing Co., Chicago, Ill.

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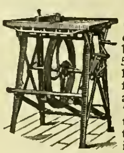

Read what J. I. PARENT, of Charlton, N. Y., says: "We cut with one of your Combined Machines, last winter, 50 chaff hives with 7-in. cap, 100 honey racks, 500 brood-frames, 2,000 honey boxes, and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make, and we expect to do it with this Saw. It will do all you say it will." Catalog and price-list free.
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325 Dearborn Street, CHICAGO, ILL.
A Journal that is over a quarter of a century old and is still growing must possess intrinsic merit of its own, and its field must be a valuable one. Such is the
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50 cents a Year. Mention the Bee Journal
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Forty Years Among the Bees, by Dr. C. C. Miller.—This book contains 328 pages, is bound in handsome cloth, with gold letters and design; it is printed on best book-paper, and illustrated with 112 beautiful original half-tone pictures, taken by Dr. Miller himself. It is unique in this regard. The first few pages are devoted to an interesting biographical sketch of Dr. Miller, telling how he happened to get into bee-keeping. Seventeen years ago he wrote a small book, called "A Year Among the Bees," but that little work has been out of print for a number of years. While some of the matter used in the former book is found in the new one, it all reads like a good new story of successful bee-keeping by one of the masters, and shows in minutest detail just how Dr. Miller does things with bees. Price, $1.00.

Bee-Keeper's Guide, or Manual of the Apiary, by Prof. A. J. Cook, of Pomona College, California. This book is not only instructive and helpful as a guide in bee-keeping, but is interesting and thoroughly practical and scientific. It contains a full delineation of the anatomy and physiology of bees. 544 pages. 295 illustrations. Bound in cloth. 19th thousand. Price, $1.20.

Langstroth on the Honey-Bee, revised by Dadant.—This classic in bee-culture has been entirely re-written, and is fully illustrated. It treats of everything relating to bees and bee-keeping. No apiarian library is complete without this standard work by Rev. L. L. Langstroth—the Father of American Bee-Culture. It has 520 pages, bound in cloth. Price, $1.20.

A B C of Bee-Culture, by A. I. & E. R. Root.—A cyclopedia of over 500 pages, describing everything pertaining to the care of the honey-bees. Contains about 400 engravings. It was written especially for beginners. Bound in cloth. Price, $1.20

Scientific Queen-Rearing, as Practically Applied, by G. M. Doolittle.—A method by which the very best of queen-bees are reared in perfect accord with Nature's way. Bound in cloth and illustrated. Price, $1.00; in leatherette binding, 60 cents.

Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—It is nicely illustrated, contains 160 pages. Price, in cloth, 75 cents; in paper, 50 cents.

Advanced Bee-Culture, Its Methods and Management, by W. Z. Hutchinson.—The author of this work is a practical and entertaining writer. You should read his book; 90 pages; bound in paper, and illustrated. Price, 50 cents.

Bienen-Kultur, by Thomas G. Newman. —This is a German translation of the principal portion of the book called "Bees and Honey." 100-page pamphlet. Price, 25 cents.

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Close Saturdays a 1 p.m.—Our customers and friends will kindly remember that beginning with July 1, for three months we will close our office and bee-supply store at 1 p.m. on Saturdays. This is our usual custom. Nearly all other firms here begin the Saturday afternoon closing with May 1st, but we keep open two months later on account of the local bee-keepers who find it more convenient to call Saturday afternoons for bee-supplies.

National Convention Notice.

The 34th Annual Convention of the National Bee-Keepers' Association will be held in Los Angeles, Calif., on August 18, 19, and 20, 1903, in Blanchard's Hall, at 235 S. Broadway. The headquarters of the Association during the convention will be at the Natick House, corner of First and Main Streets.

It is expected that this will be the largest and best convention ever held by the bee-keepers of America. Every one interested in the production of honey should be present, if at all possible. Besides the question-box, which will be one of the special features of the program, the following subjects will be discussed in papers by the prominent bee-keepers mentioned. Afterward a free and full discussion will be had by all in attendance who wish to participate. The subjects and men to introduce them are as follows:

"Honey Exchanges and Co-operation Among Bee-Keepers" by Prof. A. J. Cook, Claremont, Calif.

"How to Make Money Producing Extracted Honey," by J. F. McIntyre, Sespe, Calif. Response by E. S. Lovesy, Salt Lake City, Utah.

"The Production and Sale of Chunk Honey," by Homer H. Hyde, Floresville, Texas. Response by C. P. Dadant, Hamilton, Ill.

"The Eradication of Foul Brood," by N. E. France, Platteville, Wis.

"Reminiscences of Bee-Keeping and Bee-Keepers in the Early Days," by A. I. Root.

There will be reports by the officers, which include Pres. Hutchinson, General Manager France, and Secretary York.

The California bee-keepers are planning to give all in attendance one of the grandest receptions imaginable on the first evening, Tuesday, Aug. 18. No one will want to miss this feature of the convention.

It is an opportunity of a lifetime to take the trip to California, as all convention members can avail themselves of the low railroad rates, as it comes at the time of the Grand Army meeting in San Francisco, and the same rates apply to Los Angeles.

For further information or particulars that may be desired, address the Secretary, 144 E. Erie St., Chicago, Ill.

GEORGE W. YORK, *Sec.*
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HONEY AND BEESWAX

MARKET QUOTATIONS

CHICAGO, July 20.—Some consignments of the crop of 1903 are offered on this market, the comb in the majority of cases No. 1 to fancy, and the quality of the very best. It is many years since this neighborhood yielded in quality and quantity as now. Demand has not come for it at the present moment, but will within a short time, as it is being told that an abundant harvest of fancy honey is upon us. Prices asked are from 13@15c per pound. Extracted sells slowly at 6@7c for fancy white, 5@6c for amber. Beeswax, 30c per pound.

R. A. BURNETT & CO.

KANSAS CITY, July 28 —Some new comb honey in market, but on account of hot weather the demand is not heavy, but will be getting better every day. Fancy white comb, 24 sections, per case, $3.50; No. 1, white and amber, 24 sections, per case, $3 25; No. 2, white and amber, 24 sections, per case, $3.00. Extracted, white, per pound, 6@6½c; amber, 5½c. Beeswax, good demand, 25@30c. C. C. CLEMONS & CO.

ALBANY, N. Y., July 18.—We are receiving some shipments of new comb honey, mostly from the South; the demand light as yet; we are holding at 15@16c. Extracted slow at 6@7c. The crop of honey in this vicinity is very light, and we shall have to depend upon other sections more than ever for our supply of honey. Beeswax, 30@32c. H. R. WRIGHT.

CINCINNATI, June 1.—Very little change in market from last report. We quote amber extracted grades at 5½@6½c in barrels; white clover, 8@9c; supply equal to demand. Comb honey, 15@16c for fancy. Beeswax, 30c.

THE FRED W. MUTH CO

NEW YORK, July 8.—Some new crop comb honey now arriving from Florida and the South, and fancy stock is in fair demand at 14c per pound, and 12@13c for No. 1, with no demand whatever for dark grades.

The market on extracted honey is in a very unsettled condition, with prices ranging from 5@5½c for light amber, 5½@6½c for white, and the common Southern at from 50@55c per gallon. Beeswax steady at from 30@31c.

HILDRETH & SEGELKEN.

CINCINNATI, July 20.—The demand for honey continues slow. New extracted and comb begins to be offered largely. Prices show a downward tendency. Extracted sells at the following prices: Amber in barrels, 5@5½c; alfalfa, 6½c; white clover, 7@7½c. Comb honey, fancy water-white, will bring 14@15c; no demand for lower grades. Beeswax, 27@30c.

C. H. W. WEBER.

SAN FRANCISCO, July 22.—White comb honey, 11½@13½c; amber, 8@10c. Extracted, white, 5¼@5 c; light amber, 4¾@5c; amber, 4¼@4½c; dark, 3¾@4¼c. Beeswax, good to choice, light, 27½@29c; dark, 25@26c.

This season's crop is not only unusually late, but is proving much lighter than was generally expected. While the market is unfavorable to buyers, the demand at extreme current rates is not brisk and is mainly on local account.

WANTED! Extracted Honey.
Send sample and best price delivered here; also Fancy Comb wanted in no-drip cases.

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Mail sample and state lowest price delivered Cincinnati. Will buy FANCY WHITE COMB HONEY, any quantity, but must be put up in no-drip shipping-cases.

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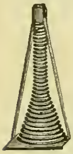

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Nat'l Bee-Keepers' Convention at Los Angeles, Aug. 18-20

AMERICAN BEE JOURNAL

43d Year. CHICAGO, ILL., AUG. 13, 1903. No. 33.

WEEKLY

THOS. WM. COWAN,
Editor of the British Bee Journal, London, England.
(See page 516.)

F.B.WHITE CO. CO.

THE AMERICAN BEE JOURNAL

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DR. C. C. MILLER, E. E. HASTY, EMMA M. WILSON

IMPORTANT NOTICES.

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Objects of the Association:

1st.—To promote the interests of its members.
2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

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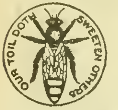
A Celluloid Queen-Button is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-lapel. It often serves to introduce the subject of honey, and frequently leads to a sale.



The picture shown herewith is a reproduction of a motto queen-button that we are furnishing to bee-keepers. It has a pin on the underside to fasten it. Price, by mail, 6 cents; two for 10c; or 6 for 25 cents. Send all orders to the office of the American Bee Journal.

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ESTABLISHT IN 1861
AMERICAN BEE JOURNAL
THE OLDEST BEE-PAPER IN AMERICA

43d YEAR. CHICAGO, ILL., AUG. 13, 1903. No. 33.

Editorial Comments

Ordering Supplies in Time.—It is not wise to wait to see what the harvest will be before ordering supplies needed to secure it. Some bee-keepers, who have followed that plan, have been badly caught this year. Their stock of sections has run out, and more could not at once be obtained, because they were not yet made, and the manufacturers were away behind orders.

The fall of the year is none too early to order for the next year. Count your fall number as wintering without loss, then figure the number of sections they will require should the season be the best you have ever known, and order accordingly.

"But," you say, "there will in that way generally be a lot of dead capital, for nine times out of ten so many sections will not be needed."

The loss from dead capital will be less in ten years than the annoyance and loss in one year of heavy flow, if you run out of sections and can not get any. It is better to make up your sections and get them all ready in the supers in winter-time or early spring, while not crowded with other bee-work. If you don't need them they will be all right for the following year. Even if not used for three or four years, they will take no hurt.

Keeping Empty Combs.—Instead of trying to keep combs in a moth-proof closet, G. C. Greiner, as he reports in Gleanings in Bee-Culture, keeps them in a *light* room, hung not too close together in racks. The light, together with the airy space between the combs, is sufficient to keep the moth away generally, and if perchance an occasional attack be made, a simple glance enables one to see what is going on.

Old vs. Fresh Foundation.—The question comes up every year from this or that beginner, "Can I use next year foundation left over from this year?" Some say: "Yes, it is just as good as new when a year old, or five years old." Others say: "No, I would melt up all left over from the previous year, and would much prefer to have it right fresh from the mill."

It is not likely that locality plays any important part in the affair, what is applicable in one place being equally applicable elsewhere, and such widely differing views are to be accounted for by the fact that too limited a view is taken in either case. The experienced bee-keeper, instead of answering the question by either monosyllable, yes or no, will answer, "That depends."

Beeswax in the form of foundation is but little affected by age when properly kept, although it may be much affected otherwise. Let it remain in the packing-box in which it is received, and years of keeping will have little effect upon it. Even if put into sections and piled up in supers in the house, it will be readily accepted by the bees when several years old. But keeping it on the hives when not being used by the bees is another matter. In the early part of the season it may be all right, and it may do no harm to put on sections a few days before they are needed, but sometimes a super of empty sections is put on about the time the flow ceases, and the bees will immediately begin to put a very thin—not so very thin if left long enough—a very thin coating of bee-glue over the entire surface of the foundation. A section thus treated, when given to the bees the next year, will be accepted very slowly, often not at all. Put such a well-glazed section in the middle of a super among sections filled with fresh foundation, and when all the other sections in the super are filled and finished, that particular section will be as empty as when given.

The moral of all this is, that you need not be afraid to keep foundation over from one year to another, either in or out of the sections, but you should not leave it in the care of the bees after the honey-flow has ceased, no matter whether it be partly filled with honey, merely drawn out, or yet untouched. Sometimes there is quite an interval between the early and the late flow. Better take off the sections at the close of the first, to be returned when needed.

Sweet Clover and Farmers.—A German friend sends a clipping from the Green Co. (Wis.) Herold, which quotes the advice to farmers of John Bauscher, Jr., with regard to sweet clover. That advice is to take vigorous measures for the destruction of sweet clover, for once introduced into fields it can be gotten out only with the greatest difficulty, if at all, as it spreads with extraordinary rapidity, completely overcoming other forage and grain plants.

It does seem a little strange that men, otherwise intelligent, should show such ignorance with regard to sweet clover. Mr. Bauscher need only to use his eyes to know that sweet clover spreads very slowly, if indeed it spreads at all, from the roadside into a field. Its sole means of propagation is by seed, and it dies root and branch the second winter, so if cut before going to seed it has no chance for continuance.

In a field of cultivated crops sweet clover is no more troublesome than red clover, and in certain places not so bad as white clover. Indeed, in some cases white clover is a troublesome weed, as in a strawberry bed, but no one on that account is likely to condemn white clover as deserving of annihilation.

In spite of the unreasonable prejudice against it, sweet clover is gaining ground as a forage-plant of value. More than one farmer, who formerly railed against it, is now putting it in his barn as good winter feed. But stock must learn to like it.

Too Much Symmetry in an Apiary Undesirable.—Editor Root says in Gleanings in Bee-Culture:

> It is a mistake to have a queen-rearing yard laid out in straight rows, and have all the grass and weeds cut out. Hives should be located in groups of one, two, three, four, and five. Do not have any two groups of the same size and appearance near each other. If there is a group of five hives here, make the next group of two; another group of four. Make each group different from the adjoining one, and, if possible, put near some distinguishing object like a tree or a bush. One group can have a large tree, and another a small one. If tall weeds grow up near the entrance, all the better. While they obstruct the flight slightly, they help young queens in identifying their entrances.
>
> And, by the way, we made a mistake in Cuba in cutting away all the grass in front of the hives, and in putting them in straight rows. The native Cuban bee-keeper lets the grass grow. His hives are laid out very irregularly, with the result there is much less robbing than there would be if they were all laid out with perfect regularity in rows, and entrances pointing in one direction. In an apiary of the last-mentioned kind, it is no wonder the bees become confused, and that robbers get a good start before the inmates of the hive realize what is going on.
>
> There is another point: It takes a great deal of time to keep the grass and weeds down. If I were running for honey and money only I would keep the entrances, the paths, and roadways clear, and that is all.
>
> You will ask why you would not find that condition of things at

our home yard in Medina. Simply because it would offend some of our visitor friends. They expect to see something like a park. But take a trip up to the Harrington yard, and you will find things as they are in Cuba.

What is true in this regard respecting a queen-rearing yard is just as true with regard to the ordinary apiary, although the consequences may not be so severe. If a worker-bee carries its load into the wrong hive, there may be no loss; its load of honey will be worth as much to the bee-keeper in one hive as in another. But if a young queen enters the wrong hive, it is quite another story. But even in an ordinary apiary there are young queens to take their wedding-trips, and entrance into wrong hives is disastrous.

One does not like, however, to have the hives in one's apiary arranged in such order as a cyclone might be expected to leave them. There is little danger from the straightest rows, provided there are objects of the right kind to help the little workers to locate their hives. A tree will help to locate a number of hives on all sides. Even a post will be a help.

Granules of Honey in Bait-Sections.—It might seem that a very little honey left in a bait-section, even if granulated, would be so thoroughly lost in the much larger quantity of fresh honey added, that no harm could result. But it is claimed that each little granule acts somewhat as a seed, rapidly increasing its kind, the smallest granule thus soon affecting the whole. Upon this point H. S. Shorthouse makes the following interesting remarks in the British Bee Journal:

> The occasional crystallization of one jar of honey which granulates, while the others remain bright and liquid, is accounted for by the fact that the bottle either contains a small portion of grit, or is slightly rough or irregular in some particular part of the inside, which lends a starting point of crystallization to the sugars which are contained in the honey in what we will term a state of super-saturation.
>
> An experiment (on crystallization), using sulphate of soda for the purpose, most beautifully illustrates this theory. If we take a quantity of sulphate of soda, dissolve it in a minimum quantity of hot water, and whilst warm tie over the neck of the vessel in which it is contained a parchment paper, and allow it to cool, we can at any moment cause the solution to crystallize by the puncturing of the paper with a needle, or by keeping the bottle air-tight we can retain it in solution form.
>
> Again, we can make solutions of chemicals and can manipulate them without any signs of separation, but the introduction of a further small crystal of the same or some other substance will spontaneously cause the crystallization of the whole, and I feel assured that the granulation of honey can be accelerated by the addition of a very small crystal of the ordinary cane-sugar.

Miscellaneous Items

The Los Angeles Convention will be held next week. Only a few days yet, and there will gather perhaps the largest concourse of bee-keepers ever gotten together on this continent. To be a member of that convention will be a treasured memory by all who can attend. It is the first meeting of the National Association in a Pacific Coast city. California bee-keepers will "lay themselves out" to see that all who are present have the best of entertainment and a good time generally.

We expect to publish in these columns a very full report of the proceedings. But such can not take the place of being present in person. All should go who can at all get away from their homes and business. Aside from the convention, the trip and social meetings and greetings will be a rare treat.

Mr. Thos. Wm. Cowan is a name well-known throughout the world of beedom. He is not only editor of the only other weekly bee-paper, but is also the author of a book on bees and bee-keeping, that has had an enormous sale in the Old World.

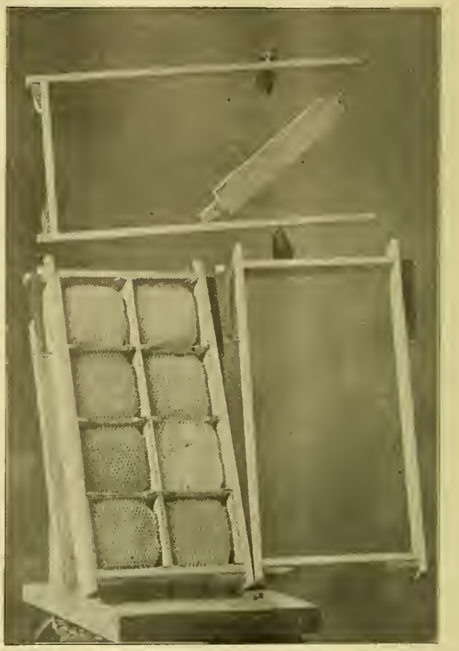
Mr. Cowan is a man most delightful to meet. He is the very essence of affability and courtesy, and his character and ability are of the highest possible. He is a member of many of the famous scientific societies in England, and has won for himself a deservedly conspicuous position in them.

Mr. Cowan has been residing in California for the past few years, but recently returning to England, with his good wife, for a stay of a year or so. It is unfortunate that he can not be at the Los Angeles convention, for his presence and help would have contributed immensely to the success of that gathering of American bee-keepers.

We are pleased to present to our readers the excellent picture of Mr. Cowan, which is reproduced from his latest photograph.

Frame for Extracting Sections.—The following is from John Trimberger, of Clark Co., Wis.:

> I send a photograph of my frame to hold sections for extracting. I use four frames holding 32 sections for one operation. I have used it three or four years now, and find it very expeditious and convenient. The stand is essential. The little honey that drips down stays inside the enclosure; the frames remain dry. How the sections are held together can be seen in the picture. To take the sections out, I hold the frame with sections about six inches above the table, then drop the farther end on the table, at the same time pull the shifting end-bar, held by rubbers, toward me, and, presto, out drop the sections.
>
> To put the sections in: After the lower six are in the frame I stand the 7th and 8th against the upper bar, then lift it up and the two last sections drop back in place automatically.
>
> One of the combs in the picture has been mutilated by those inspecting it during zero weather, before the photographer had a snap at it.
>
> John Trimberger.



PLAN FOR EXTRACTING SECTIONS.

That car-load of Bee-Keepers for the Los Angeles convention was assured in good time. As is usually the case, many must decide at the last minute about going. There are so many things to be considered—so many other things to be arranged for leaving—that it is exceedingly difficult for some to go away from home at all, especially when it is necessary to be gone for two weeks or more, as in taking a California trip.

But the company in the special car travelling across the continent will be the best kind of a convention in itself. A car-load of bee-keepers! Who ever heard of such a thing before? And to ride 2000 miles with Dr. Miller, A. I. Root, Hutchinson, and others! That surely will be a memorable event. There should have been 40 or 50 in the company instead of 25 or 30. But to succeed in getting the required number and a few more is something to rejoice over.

You will likely hear more about that car-load of bee-people later on.

Contributed Articles

A Cool Season in California.

BY PROF. A. J. COOK.

WE often find that with the seasons and years we are forced to change some of our old and, as we supposed, well-grounded opinions. I commenced keeping bees in Michigan in 1870, and for more than a dozen years had good honey-production; so I came to the warranted conclusion, as one might suppose, that a fairly good honey crop could be counted on in that goodly State. I felt in those days that the only certain checks on certain or assured success were disastrous wintering, which I soon solved; and "foul brood," which, fortunately, never laid its fatal clutch on my pets of the hive.

Imagine my surprise, then, when three seasons of unprecedented drouths gave us no honey at all. We had to reformulate our opinions, and say with the proper rainfall we were sure of a honey crop. In Michigan, we rarely had a year so cool that it precluded, for the season through, all nectar-secretion.

In California it has been usually, I supposed always, true, that with sufficient rainfall we were sure of a good honey-year. I was told when I came here, nearly ten years ago, that with 15 inches of rainfall we were sure of a good honey-product. This led me to proclaim two valuable characteristics of our section for the bee-keeper: We could be sure of a phenomenal honey-product with a year of ample rainfall; and, second, we could know by early spring whether or not the crop was to be ours, and so could buy, or not buy, our supplies, and could arrange our business as the circumstance of rainfall dictated. If this were surely true, it would be no mean factor in our conclusions as to our standing as the leading honey State in our country, and probably one of the very best in the whole world.

The present season has changed our views, and we find we have to reckon not only with rainfall, but with the cold and damp of spring as well. Last winter gave us a generous rainfall, and we, from all former experience, so far as I knew, had a right to count on a large and sure honey-product. Indeed, for all the years that I have been here, we never have had such abundant and well-timed rains as were ours the past season. As we should expect, the herbage and flowers have been very rich and luxuriant. Yet I doubt if we can secure more than one-third of an average honey crop this year.

The reason is not far to seek. We have had an exceptionally cold and damp season. Many mornings of April and May, and on into June, were so cool that a little fire was agreeable nearly every morning. This cool of the morning held on through the entire day, and while the bees, true to their nature and habits of industry, were out early for the possible nectar, failed to store as we had been led to hope would be the case.

As just stated, I doubt if we will secure more than one-third of a crop in this section of the State. In the north the rainfall was also short, so I doubt if we make any mistake in giving this as the probability for the entire State for the season.

Unfortunately, this removes the ground for sure prophesy in the early season, and we must put a question-mark after the prospects, even in seasons of generous rainfall, for we must also have the genial warmth, for though a damp, cool season may secure ample vegetation, it will not give us the nectar in the flowers.

A PROMISING REGION.

There is being carved out of the very desert of Riverside County, Calif., a very promising region, agriculturally. I speak of the Indio or Coachella valley on the Southern Pacific railroad, about 150 miles east of Los Angeles. This was absolute desert, but, like most of California, the soil is a rich alluvium, and is also very deep and pliable, so that it needs only water to make it wondrously productive. Three years ago it was found that by boring artesian wells a copious supply of the finest water has been secured. These great artesian wells are a marvel to behold. They pour out with no pumping at all. While the country only awoke to man's attention three years ago, there are already hundreds of these wells, and an area of richest verdure already makes this one of the most attractive agricultural regions to be seen anywhere.

The climate is warm the entire year, and very warm in the summer. Yet it is so dry, atmospherically, that people work, they say, comfortably all day in the hot sunshine, even roofing buildings.

This region is going to be a great alfalfa country. So great is the warmth that even ten crops of alfalfa are grown in a year, and in many cases 2½ tons to the acre are secured. This is sure to become a great alfalfa section. Even at present they are growing alfalfa and feeding hogs at a great profit. There is also a great natural growth of mesquite, which is also of the great Legume family, and, as we should expect, one of the best of honey-plants. I see no reason why this new region should not more than surpass the famous San Joaquin region, and should not equal the very best parts of Arizona. I look to see in the Coachella valley not only one of the best farming sections in the United States, but one of the best regions for honey-production in the world. This valley is so early that early June cantaloupes are sent to Chicago; and early July grapes can be produced in profusion. It will be the great place for early fruits and vegetables.

Los Angeles Co., Calif., July 17.

Examining Apiaries and Curing Them of Foul Brood.

(*Special Bulletin by the Ontario Department of Agriculture.*)

BY WM. M'EVOY, INSPECTOR OF APIARIES.

BEFORE opening any colony, go from hive to hive and give each colony a little smoke at the entrance of their hive. This will check the bees for a time from coming from other colonies to bother you when you have a hive open and are examining the combs.

When you take out a comb to examine it, turn your back to the sun and hold the comb on a slant, so as to let the sun shine on the lower side and bottom of the cells, and there look for the dark scales left from the foul matter that glued itself fast when drying down; for where you find punctured cappings and ropy matter you will find plenty of cells with the dark stain-marks of foul brood on the lower side of the cells. Every bee-keeper should know the stain-mark of foul brood, as it is more important for him to learn to tell it at a glance than to have to use a pin and lift a little of the matter out of a cell by the head of a pin to see if it will stretch three-fourths of an inch. Dead brood of other kinds often have pin-hole cappings, and several cells in the same combs will be found with scales in them; and for this reason every bee-keeper should learn to tell the one class of dead brood from the other, because we often find both classes of dead brood in the same colony with very little foul brood in the same comb, that the bee-keeper did not notice; after testing the other kinds, and not finding any to stretch he felt sure that that colony was not diseased when it was, and in time it would get worse, and get robbed out by the bees from other colonies, and then the disease would be spread all through the apiary.

I have often been called to come at once by parties feeling sure that their colonies had foul brood, and when I got there I sometimes found that it was not. In some cases I found a very sudden loss of the most of the old bees, and nearly all the brood dead and decaying. This was the result of some foolish people spraying fruit-trees while in full bloom, and the bee-keeper, not knowing what caused the sudden loss of nearly all his old bees, and finding so much decaying brood, felt sure that his colonies had foul brood. The only sure way for those people that cannot tell foul brood at a glance, is to put the head of a pin into the matter in the cells and lift it out, and if it stretches they can depend upon it that it is foul brood; but, as I have often said, the most important thing to learn is to know the stain-mark of foul brood, and then it never will make much headway in any apiary or cause much loss, because the bee-keeper would spot the disease at a glance and head it off at once.

Honey, to become diseased, must first be stored in cells where foul-brood matter has been dried down, and it is the bees feeding their larvæ from the honey stored in these diseased cells that spreads foul brood. More brood dies of foul brood at the ages of six, seven, eight and nine days than at any other age.

The disease is spread by bees robbing foul-broody colonies, and they carry the disease just in proportion to the amount of diseased honey they convey to their own hives.

Every diseased apiary should be treated according to the exact condition in which it is found, so as not only to drive out the disease, but to make considerable increase in colonies, and end by having every colony in first-class condition. In the honey season, when the bees are gathering freely, is the only safe time to make increase in a diseased apiary, and I make this increase by tiering up two hives full of the best brood with about a quart of bees until the most of the brood is hatched. By that time I will have a very large colony of young bees just in the prime of life, and when these bees are all shaken into a single hive and treated I will have a first-class colony made out of them. In every apiary that I had treated in the honey season I always had increase made by having the best brood tiered up with about a quart of bees, and left until most of the brood was hatched, and then had these bees treated just the same as the old bees that I shook off the brood and treated first.

HOW TO CURE THE APIARIES OF FOUL BROOD.

In the honey season, when the bees are gathering freely, *remove the combs in the evening* and shake the bees into their own hives; give them frames with comb foundation starters on and let them build for four days, and store the diseased honey in them which they took with them from the old comb. Then, *in the evening of the fourth day*, take out the new combs and give them comb foundation to work out, and then the cure will be complete. By this method of treatment all the diseased honey is removed from the bees before the full sheet of foundation is worked out. Where you find a large quantity of nice brood with only a few cells of foul brood in the most of your colonies, and have shaken the bees off for treatment, fill two hives full with these combs of brood, and then place one hive of brood on the other, and shade this tiered-up brood from the sun until the most of it is hatched. Then, *in the evening*, shake these bees into a single hive and then give them frames with comb-foundation starters, and let them build comb for four days. Then, *in the evening of the fourth day*, take out the new comb and give them comb foundation to work out to complete the cure. After the brood is hatched out of the old combs they must be made into beeswax or burned, and all the new combs made out of the starters during the four days must be burned or made into beeswax, on account of the diseased honey that would be stored in them.

Where the diseased colonies are weak in bees, put the bees of two, three or four together, so as to get a good-sized colony to start the cure with, as it does not pay to spend time fussing with little weak colonies. All the curing or treating of diseased colonies should be done in the evening, so as not to have any robbing done, or cause any of the bees from the diseased colonies to mix and go in with the bees of sound colonies. By doing all the work in the evening it gives the bees a chance to settle down very nicely before morning, and then there is no confusion or trouble. When the bees are not gathering honey, any apiary can be cured of foul brood by removing the diseased combs in the evenings and giving the bees frames with comb-foundation starters. Then, also in the evenings feed the bees plenty of sugar syrup, and they will draw out the foundation and store the diseased honey which they took with them from the old combs. In the fourth evening remove the new combs made out of the starters, and give the bees full sheets of comb foundation, and feed plenty of sugar syrup each evening until every colony is in first-class order every way. Make the syrup out of granulated sugar, and put one pound of water to every two pounds of sugar, and then bring it to a boil.

Where you find the disease in a few good colonies after all honey-gathering is over, do not tinker or fuss with these in any way just then, but carefully leave them alone until an evening in *October*, and then go to the diseased colonies and take every comb out of these colonies and put six combs of all sealed or capped stores in their place, taken from sound colonies, and on each side of these all-capped combs place a division-board. This will put these colonies in first-class order for winter with little or no bother at all, and the disease crowded clean out at the same time.

But some may say that the disease cannot be driven out so simply in the fall by taking away the diseased combs and giving the bees six combs that are capped all over right down to the bottom of the frames. It can and does cure every time when properly done, and if you stop to think you will see quite plainly that the bees must keep the diseased honey they took out of the old combs until they consume it, as they cannot find any place in all-capped combs to put it, and that will end the disease at once.

Many bee-keepers will no doubt say that this fall method of treatment will not work in their apiaries at all, because they would not have enough of the all-capped combs to spare from the sound colonies, even if they could find some all-sealed. Very true; but you can very easily secure abundance of all-capped combs by putting Miller feeders on your sound colonies in the evenings in September, and feeding these colonies all the sugar syrup you can get them to take; and then in October each of these fed colonies can spare the two outside combs, which will be nicely capped all over right down to the bottom of the frames, and with these all-capped combs you will be provided with plenty of good stores to carry out my fall method of treatment. I finished the curing of my own apiary in the fall of 1875 by this sealed-comb treatment, when I had foul brood in my own apiary. All of my methods of treatment are of my own working out, and none of them ever fail when properly carried out.

Empty hives that had foul brood in do not need any disinfecting in anyway.

In treating diseased colonies never starve any bees, because it unfits them for business and makes them thin, lean and poor, and is also hard on the queens. I never starved any bees, but always tried to see how fat I could make them while treating them by feeding plenty of sugar syrup when the bees were not gathering honey.

If you have nice, white combs that are clean and dry, and that never had any brood in them, do not destroy one of these, as they are perfectly safe to use on any colony of bees just as they are, and are very valuable to any bee-keeper. I once got a bee-keeper in the State of Vermont to save over 2000 nice, white combs, when he wrote to me for advice, and the saving of this class of combs must have been worth fully $300 to him. But I have always advised bee-keepers to convert into wax all old combs that ever had one cell of foul brood in them, and the only article that will take all the wax out of the old combs is a good wax-press; and as this will pay for itself many times over its cost, I urge the bee-keepers everywhere to buy one.

NOTE.—Any bee-keeper desiring to know whether his bees are affected with foul brood may send by mail a sample of the diseased comb, enclosed in a pasteboard box, to Wm. McEvoy, Woodburn, Ont., Canada. Please see that the sample is free from honey so that other mail matter will not be injured.

Spring Feeding—Habits of Bees.

BY C. P. DADANT.

I BEG the reader to forgive me for referring to this subject once more, but I cannot leave Mr. A. C. Miller's criticisms unanswered. This will be my last article on this subject, for I realize that long controversies are tiresome to the readers.

Mr. Miller (page 454) accuses me of taking his remarks as a personal attack. I cannot see where he received this impression. I aimed to answer nothing but his arguments and assertions. But it is quite difficult, I will agree, for one to keep his temper when another asserts that the facts you advance are not true.

Mr. Miller takes me to task and criticises my arithmetic and my ignorance of the length of time it takes for a bee to hatch, because I said that the colony that had been self-feeding by slow robbing had almost doubled in a month or so. Mr. Miller, of course, takes the month from the first day of the feeding instead of from the last, as it serves his purpose better, leaving out two weeks of the increase caused by continued feeding. At the end of a month from the first day the increase caused would show but the result of nine days of feeding instead of two weeks. I am so well aware of the necessity of a lapse of time between the laying of the eggs and the harvest, that it is on that point that all my efforts are directed. I want my bees to rear their young at the time when they are likely to be useful for the harvest. If I induce breeding early I do like the poultry-raiser who induces his hens to lay eggs early, when they are valuable. If the harvest begins June 1st and lasts 4 weeks, the bulk of the breeding must be done early in May, and the bees that will hatch from eggs laid June 10th will help consume the honey instead of helping to harvest it. So I insisted, and still insist, on the necessity of encouraging breeding early before the honey crop.

Left to themselves the bees will, of course, breed all through the spring, and will breed more plentifully if they are wealthy than if they are poor, provided they are not so crowded with honey as to have no room for brood; but the breeding will be still more enhanced if the colony is encouraged by feeding when there is nothing in the field. I deprecate the feeding of a rich colony because there is danger of overcrowding their combs with honey, and for no other reason. We have often, in the case of a rich colony, practiced the uncapping of a few cells from time to time, to induce them to feed and consume the honey. That has about the same effect on a rich colony that a little feeding has on the one that is more scantily supplied.

Mr. Miller quotes my own words in Langstroth Revised on that subject. Let me in turn quote him, the master himself, in a previous edition:

"By judicious early feeding a whole apiary may not only be encouraged to breed much faster, but they will be inspired with such vigor and enterprise as to increase their stores with unusual rapidity."

Mr. A. C. Miller will, of course, take objection to this teaching. He has tried feeding in all sorts of ways, and "always at a loss." Ergo, no one can succeed, Langstroth and others to the contrary notwithstanding.

Because I said that we should not feed when feeding would induce bees to fly out in weather cool enough to chill them before their return, or when they found honey out-of-doors, Mr. Miller concludes that when we can feed, we should not, and when we should feed, we can not. This is hardly good faith. There are plenty of times when there is no honey in the fields and yet it is suitable weather for bees to fly. At such times feeding encourages breeding.

When I wrote the previous article, I stated that we were then feeding some 60 colonies. It was about the last of April, and we had been feeding already for some time. We do not practice feeding every year, because it requires a great deal of attention on the part of the apiarist, and I like to look after this myself, and do not always have the time. This year I had two reasons for doing it. The fields were promising an immense crop of clover, and the weather was so changeable, and the early blossoms so scanty, that the bees were very irregular in their breeding. According to Mr. Miller, I fed "at a loss." What of the results? Our apiary foreman is acquainted with a number of apiarists in the neighborhood, and he says: "There is not a single apiary in the immediate vicinity that has such a crop as your home apiary. Some colonies have yielded 400 pounds, and the entire average at this date (about the end of the clover crop) is about 300 pounds per colony."

There are a number of readers of the American Bee Journal in this place, and it is not difficult to verify this statement. Of course, Mr. Miller can say that we would have a still better crop if we had not fed the bees, or that the result is due to other causes. For my part, I am sure that stimulative feeding had much to do with the results.

Mr. Miller tells me that he is ahead of me on some of the habits of the bee; I'll grant this; that the bees never give food on the tongue. Whether this is so or not, it has very little to do with the present discussion. I have seen bees make a "show of tongues"—perhaps they were only kissing. Feeding enchances breeding, because the bees are stirred up by it and because the queen is offered food more plentifully whether it be royal jelly or honey.

Mr. Miller denies flatly the deference of bees for their queen, and asks me to "look again." And would looking again and failing to see it cancel the hundreds of instances where I have seen and shown to visitors, even on the comb held in the hands, the bees making an admiring circle around their queen and getting out of her way at the least move she makes? They realize that she is indispensable, and are ever ready to offer her food, if they have any to offer, which is of course oftener the case when some fresh supply is brought from the field or from the feeder.

Of course, there is no such a thing as a "body-guard liable to instant banishment from neglect of duty," criticised by Cheshire, but this writer himself notices their attentions to her welfare, and backing out of the way not to impede her movements, with the constant offering of food by the neighboring nurses. It is nothing but deference or respect due to the knowledge of her importance in the hive, call it in whatever terms you like. Hancock Co., Ill.

The Premiums offered this week are well worth working for. Look at them.

Bacillus Alvei and Mesentericus.

DR. LAMBOTTE awakened serious fears that the microbe of foul brood was nothing more nor less than one of the commonest bacilli, to be found everywhere, only awaiting sufficiently favorable conditions to start a case of foul brood. It is comforting to know that authorties whose opinions are entitled to respect do not accept as sufficient the proofs that Dr. Lambotte has given. Prof. Harrison, a man of whom our Kanuck friends ought to be proud, seems to have given the matter very careful consideration, and still thinks *B. alvei* distinct from *B. mesentericus*.

Now comes a man whose word always counts, Thos. Wm. Cowan, and after reading what he says, one hardly need lose sleep over Dr. Lambotte's investigations. Mr. Cowan says among other things, in the British Bee Journal:

> An examination of Dr. Lambotte's paper will at once convince the unprejudiced mind that there is very little to be alarmed about. It is quite true that Dr. Lambotte says *bacillus alvei* and *bacillus mesentericus vulgaris* are one and the same, and that all previous investigators have made a mistake, but it is not necessarily true because he says so.
>
> That the products of both have a ropy and viscous character does not necessarily make them identical, and even if they were they might be produced by different bacilli. Much importance is given to an assumption that the harmless *B. mesentericus* can be, under certain conditions, made to produce disease, and upon this hypothesis—not generally accepted —Dr. Lambotte bases all his conclusions. He is unfortunate in his illustration, for he does not prove that "flacherie" in silkworms is not produced by a specific germ, but only thinks that "if the investigation were again taken up with the present knowledge it would be found that at least one of the forms of this malady would be traced to microbes of the mesentericus family." There is not a shadow of evidence in support of this theory, or that mesentericus has anything to do with the disease, and even if it did it would prove nothing in regard to foul brood. We certainly can not understand Dr. Lambotte trying to maintain his theory in the face of his experiments. He failed entirely to produce foul brood with a cultivation of *B. mesentericus* spread over the brood. Some of the larvæ were killed and surrounded with infecting material, but after three days the bees had cleaned out the cells, and there was no further damage. Although this experiment was repeated a number of times, it failed in every instance to produce the disease. We know perfectly well from long experience that such an experiment with *B. alvei* would have produced foul brood in a virulent form in the strongest colony.
>
> *Bacillus mesentericus* is found almost everywhere, and were it the cause of foul brood we should also hear of this disease wherever bees were kept, but there are many districts where foul brood has not been known to exist, and in every case of an outbreak where investigation has been made, it was found that it had existed there before, or had been by some means introduced.
>
> Without going more deeply into the matter it need only be said that we can not accept Dr. Lambotte's explanation, knowing as we do how rapidly foul brood spreads even when colonies are in the best condition. On the other hand, we also know that when certain means are employed the disease can be got rid of, so that with the present knowledge available we need only follow out the practices usually advocated in order to obtain the best results.

Honey as a Health-Food is the name of a 16-page leaflet (3½x6 inches) which is designed to help increase the demand and sale of honey. The first part is devoted to a consideration of "Honey as Food," written by Dr. C. C. Miller. The last part contains "Honey-Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by every one who has honey for sale. It is almost certain to make good customers for honey. We know, for we are using it ourselves.

PRICES, prepaid—Sample copy free; 10 for 20 cts.; 25 for 40 cts.; 50 for 70 cts.; 100 for $1.25; 250 for $2.25; 500 for $4.00; 1000 for $7.50. Your business card printed free at the bottom of the front page, on all orders for 100 or more copies. Send all orders to the Bee Journal office.

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

An Interested Sister.

I am much interested in our "corner" of the American Bee Journal. I am one of the admirers and readers of the Journal, to which I have subscribed for many years. I will be glad to be a "contributor." I have kept bees for about 14 years, with varied luck and experience. I will write more at length soon. MRS. E. G. BRADFORD.

Newcastle Co., Del.

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How One Sister Dresses for Bee-Work.

I am not used to writing for publication, and it has seemed quite a task. I fear you will feel like I do myself, and will dump this in the waste-basket. However, I shall make the effort.

I think the Sisters department fine, and enjoy the contributions, particularly the *dressy* ones.

Lake Winnebago is less then a mile from us, and we have a fine view of it from the porch. There are about 1200 apple, cherry, and plum trees in the orchards, and my bees have an ideal home, as well as myself. I have 36 colonies. I moved 39 colonies 14 miles last December, and put them into the cellar without a flight, or even taking the screens off the top of the hives, and so many of them came out and died on the cellar-floor that I told my family I would be glad to find half a dozen alive in the spring; but they all lived through. I found a great many broken combs, and have had a great deal of work mending them, and clipping queens' wings.

I number my hives with a crayon, and keep a book with a short record of the condition of each colony, and then I have some idea which ones need looking after first. They are all strong, but none of them have swarmed, nor do I want them to do so. Several are, or have been, at work in the supers, and I have taken off a few nicely sealed sections of dandelion honey, but the last two days we have had a cold northeast wind, and to-night it feels as if we might have snow.

I have kept a few bees for 20 years. We found our first colony clustered on an oak-tree. For a few years we thought we did well if we got honey enough for our own use. The men did not care for the bees as I thought they ought to, and for the past 15 years I have taken all care of them. I only have to have them carried into and out of the cellar.

I buy my hives in the flat and nail them myself. I find that if I care for 30 colonies I have enough to keep me busy. Last year I had 23 colonies, spring count, and increased to 41. I had nearly 3000 sections of very nice honey, and found two colonies had been robbed, and the worms had eaten the combs. I doubled up some of the weakest. Just as the blossoms were opening I carried the weakest colony, after catching their queen, and put them above the one I wished to unite them with, with a piece of strong paper between in which I had punched a hole large enough for one bee at a time to pass through at night, and in the morning I saw they were carrying out dead ones and having a general war. I used a spray on both hives, using sweetened water with violet perfume, and mixed them all up, putting the frames that had no brood in the upper hive, and I have had no more trouble since then. I have united two more without the loss of a bee, so far as I could see.

I wear a sailor-hat, with black lace stitched fast to the brim, and let it fall loose on my shoulders. If a bee gets in I just raise my veil and let it out. I like an extra hat-pin to pin my veil down in front if I am bending over a hive, and find it handy to pick out a worm if I should happen to see one.

I use a pair of asbestos gloves, such as firemen and engineers use. They do not get scorched on the smoker, and if I get them covered with honey, as I often do when cutting out drone-comb, I take a cloth and wash them off, and they are as soft as ever after they are dry. I clip off the ends of the fingers and thumbs. I like a clean, well-starched cotton-dress, or, if cool, a shirt-waist and heavy skirt.

When cutting out drone-comb I crush all empty waste comb in my hand into a ball and throw it into a basket or bag with the scrapings and all waste, and after the season is over I take a day and melt it out in the oven. If I have pieces with brood in them I throw them out to the chickens; they are so fond of it, and they will come around the hives waiting for it while I am at work, until the bees get after them, when they soon forget what they were after.

Now, if this finds the way into the waste-basket I shall not be surprised, as I do not think I have given any new ideas, for I think I have seen it all in the American Bee Journal; but I should be delighted to give you a chance to become better acquainted with me, if you should ever come to this vicinity—right here at "The Orchards."

ELIZABETH M. SMITH.

Winnebago Co., Wis., May 31.

Indeed, your communication will not go into the waste-basket. It is extremely interesting, and I hope you will soon favor us with another.

You must have an ideal home. If you are any like me you will thoroughly enjoy the lake, especially fishing in it. I almost envy you that part of it.

I am glad you are sensible enough to use a record-book. How any one can keep bees and get along without one is a mystery to me; but you see we don't all think alike.

I wish you would tell us more about those asbestos gloves. Where can you get them? Do they wear well? Are they proof against stings, etc.? Your bees are not as cross as ours are this summer, or that loose veil would never answer. Too many bees would get under it at once, and when you were attempting to let them out a whole lot more would get in.

Thank you very much for that kind invitation to get better acquainted with you in that ideal home. I should thoroughly enjoy accepting it, but this is such a busy world I am afraid it won't be possible to do so very soon.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

When to Take Off Honey.

I have several supers of fine honey all capped over and finished. Would you advise me to take it off and put it in a well-ventilated room, or leave it in the hive? If the latter, how long? IOWA.

ANSWER.—Take it off as soon as finished. The honey will be as good or better if left on longer, but the comb will become dark.

◆

Brood-Chamber Crowded with Honey.

Upon examining one of my hives I found honey all through the brood-chamber, and, to my surprise, a dead queen. Shall I take about 4 of these frames and put them above in an extracting-super, or leave it to the new queen to which I was going to give 4 frames of full foundation? Just at present she has no place to lay. MINNESOTA.

ANSWER.—If you intend to extract the honey, you may as well extract it out of the brood-combs; but if you leave it in the brood-chamber the bees will empty out cells as fast as the queen needs them.

◆

Pumpkin Blossoms as Nectar-Yielders—Difference in Bees.

1. Do pumpkin blossoms, nettles, common mint, peppermint, snap-dragon, camomile and love-in-tangle produce honey or pollen for honey-bees?

2. I have five-banded Italians, the queens are large and fine looking, but do not seem to produce extra-good gatherers, as other bee-keepers about a mile distance, but in another valley, have nearly double the yield I have this sea-

son. I bought a late June swarm from one of them. Would you advise breeding from this swarm's queen, or introducing new stock by buying a new queen from some reliable breeder? and would you advise getting a red clover queen?

Although these other bee-men are in a different valley, they claim their bees come through a gap between the mountains into the valley mine are in.

My hives are 10-frame chaff, reduced to 8-frames by division-boards or dummies. Pennsylvania.

Answers.—1. Pumpkins and all kindred vines do, also the mints; I don't know about the others.

2. It is possible that your neighbor has better bees than yours; it is also just possible that his bees have the advantage of pasturage, even if they are only a mile away. Before deciding fully, you can compare the work of the new swarm with that of your other bees. As the expense would not be great, it might be well at the same time to get a queen of good stock—red clover queens may or may not be better than others—then when you see the work of the progeny of your new queen—that is, of colonies having queens reared from her—you can breed from the best.

The Division-Board and Its Use.

In regard to the use of the division-boards, I would like to be informed. Is the board placed in the center of the brood-chamber or to one side, and for what purpose is it used, anyway? Minnesota.

Answer.—What you call a division-board is really a dummy. Its purpose is to fill up the extra space in the hive after all the frames are in. If the hive were just large enough to take in the frames it would be difficult to take out the first frame. The dummy is put in either side, and is easily taken out. When that is out there is plenty of room to take out the first frame. That gives the one and only use of the dummy.

Swarming—Rearing Queens.

1. What is the matter with one of my colonies? It issued as a swarm June 14, that returned to the old colony; June 26, in the forenoon, they issued as a second swarm, which returned, and a third swarm came out in the afternoon, which I hived. Two days later a fourth swarm came out. I sent these back by killing the queen and cutting out all the queen-cells, for the old hive had a queen. They do not have any brood now.

2. How can I rear some queens when there are no queen-cells in any of my colonies?

3. What caused one of my colonies to cast two swarms that returned, and not any that stayed out?

4. Will an 8-frame dove-tailed hive hold enough honey to winter a 12-pound swarm? Minnesota.

Answers.—1. June 14 the old queen issued with a prime swarm. Through defective wings, or for some other cause, she could not go with the swarm, and the bees returned. By June 26 a young queen had emerged, but she was also unable to go with the swarm, and you hived the swarm with a later queen. No brood would be in the hive till their young queen was old enough to lay.

2. Remove the queen from a strong colony and the bees will start queen-cells galore.

3. It may be that the queen could not fly. Then they tried it the second time with the same result. Then because of discouraging weather, or for some other reason, the bees gave up further swarming.

4. Yes, if the frames are full enough.

Moths and Worms Destroying Bees.

How can I drive out the moths and worms that are destroying my bees? They kill the brood, and even get into the supers. How would it do to throw salt or lye into the hives? I fired one hive, but that was hard on the bees. Illinois.

Answer.—There is no way you can drive the bee-moth without driving out the bees; but you can get the bees to do it for you. Keep your colonies *strong*, and they will look out for the moths, especially if you have Italian blood in your bees. You can, however, give the bees some help by disposing of the large worms in the combs. Take a wire-nail and pick a hole in one end of a worm's web or gallery, then start at the other end, digging after the worm till it comes out for you to kill.

Colonies Eating Eggs and Destroying Queen-Cells—Extracting from Brood-Combs, Etc.

1. Why do queenless colonies eat or destroy eggs given to them to rear a queen? One of my colonies destroyed a cell I gave them, and are queenless yet.

2. Can honey be extracted from comb having a small patch of brood in it, and not injure the brood?

3. How long can a queen be confined without injuring her future laying?

4. Why does a queen sometimes lay 2 or 3 eggs in one cell?

5. Why do bees swarm after filling the body of the hive and full size 8-frame body on top one-fourth full, as mine did yesterday, July 6? Idaho.

Answers.—1. Bees frequently eat or destroy eggs given them or left with them when queenless. I don't know why. They will also destroy queen-cells sometimes for no apparent reason.

2. Yes, if you don't turn rapidly enough to throw out the brood.

3. I don't know; probably a week or two; possibly longer.

4. Sometimes there seems to be something exceptional or wrong with the queen; she lays two or three eggs in a cell when other cells are empty.

5. Generally because crowded for room; in which case it's a sign of a good queen.

Lazy Bees—Comb or Extracted Honey—Introducing Queens.

1. I have a colony of bees which seems lazy; they will not store honey in the super at all, while the others do. Would it be a good plan to requeen?

2. Which would be more profitable for this locality (northern Vermont) comb or extracted honey, both selling at the same price?

3. Which hive is the best to use for extracted honey, the 8 or the 10 frame Langstroth, or the Draper barn?

4. Do you think forced swarming could be successful here?

5. I have a new swarm in a Danz. hive which is too weak to work in a super. If I should have another swarm come out would it be all right to hive them in the same hive with the weak one?

6. What is the most successful way of introducing queens? Vermont.

Answers.—1. Probably; although without knowing more about the case it is hard to say.

2. Probably extracted.

3. One of the larger size.

4. Yes.

5. Yes, only you must look out for fighting if the added swarm has a virgin queen.

6. Hard to tell. The plans are legion, every plan heralded as the most successful, and each in turn failing at times. Lately I have been using the water plan with entire success, but whether it would always succeed so well is a question, for I have used it only during a honey-flow. Hold the queen in water till she is nearly, or entirely, drowned, then give her to the queenless colony by laying her on one of the top-bars.

Amerikanische Bienenzucht, by Hans Buschbauer, is a bee-keeper's handbook of 138 pages, which is just what our German friends will want. It is fully illustrated, and neatly bound in cloth. Price, postpaid, $1.00; or with the American Bee Journal one year—both for $1.75. Address all orders to this office.

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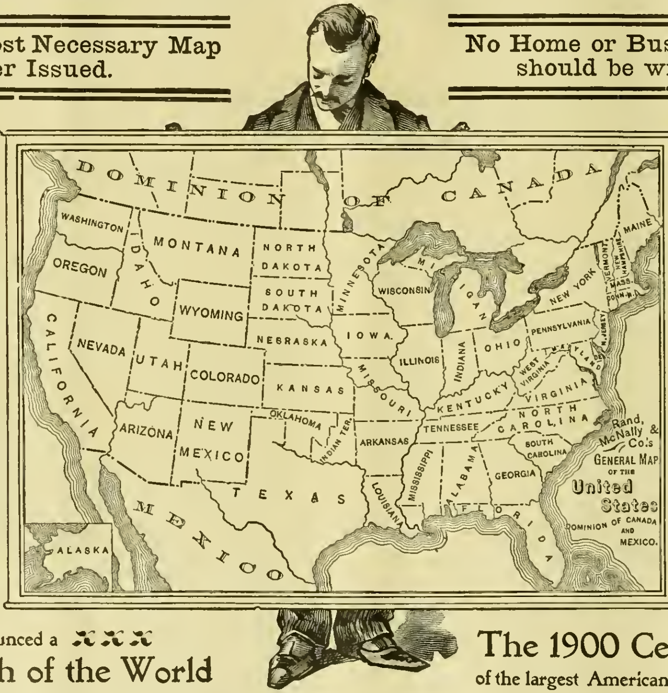

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I like your queens. The best of any that I ever had. Respectfully yours,
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DEAR SIR:—Enclosed please find money order for $1.50 for which send me two untested honey-queens. The one I bought of you two years ago is all right. There are no better.
Respectfully yours,
GUS PICAMAN.

Notice.—No tested stock sent out before May 15. Send money by P. O. Money Order or Express Order. **D. J. BLOCHER,**
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FROM MANY FIELDS

A Great Year for Bees.

This has been a great year for bees here in Kansas. Some of the bees have swarmed again and again, and where they have had the proper care they have stored from 50 to 150 pounds of white clover honey per colony; and we still have the fall flow to come, which, at present, seems very promising.

I have the care of 60 colonies, some of them belonging to my neighbors, and I care for them on shares. J. M. CHRISTIE.

Coffey Co., Kan., Aug. 3.

Brought Up Among Bees.

If I live to see Aug. 4th, I shall be 67 years old. I was brought up among bees as a child, and was with them until I came to America, 23 years ago.

A friend of mine bought 7 colonies one year ago, and gave them to me to be run on shares. This year I have transferred all but 2, and increased to 24, and all are doing well. I put them in 8-frame hives with half sheets of foundation.

I was taught a good deal about bees and their nature and ways, yet I am glad that I

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We prefer to use all of these Queens as premiums for getting new subscribers. But if any one wishes to purchase them aside from the Bee Journal subscription, the prices are as follows: One Queen, 75c.; 3 Queens, $2.10; 6 Queens for $4.00.

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can find so much help in the good old American Bee Journal. I can not do without it, and I am not like the poor fellow who wanted it stopped because he had no time to read it. Poor fellow; I pity the man.

I shall want to ask a question or two after a little if it is all right, as I am building a bee-house and want to go into extracting a little next year. JOHN COATES.

Dunn Co., Wis., July 29.

[Send on your questions any time.—ED.]

Home-Made Grape-Nuts and Postum.

In a late editorial there was an objection made to mixing honey with some cheaper food to increase the sale of honey. I wish to give an account of a little discovery that I lately made.

I was eating a slice of bread well saturated with honey when I was called away. I slipped the plate in the oven, and when I resumed my meal I had "Grape-Nuts." Further experimenting showed me that crusts of bread saturated with honey and dried in the oven gave me "Postum." I was using Postum and Grape-Nuts at the time, but I make my own now at a wonderful saving.

I wish that you would test this, and also discuss it at the coming convention.

Understand, the crusts of bread for Postum, and the inner loaf for Grape-Nuts—a "predigested" food—at a saving of 75 percent. What would it amount to if all the bee-keepers would use it? S. TROWBRIDGE.

Clay Co., Fla., July 22.

Not Satisfied with Honey-Prices.

My 65 colonies of bees came through in good condition, although an exceptionally cold April was very hard on them. May, however, brought its fine weather, and we have done, I think, very well considering that we keep bees as a "side line."

We have increased, by swarming, to 88 colonies, and taken 3575 finished sections of honey.

I am not satisfied with the prices. For instance, the Kansas City quotations on the same grade of honey that I produce is $3.50 and $3.75 per case, while the Birmingham, Ala., price is $3.00 a case, less freight, and 10 percent commission. When we remember what a city Birmingham is, and what a fine market it is for other produce, we can readily see the importance of asking more for our honey. And to ask more means to get more—I have tried it. We should get together and get 12½ cents at the apiary for our No. 1, and 16⅔ cents a pound for our fancy comb honey.

My wife enjoys the Sisters department, and if we did not have so many girl babies to look after she might sometimes write a line for it.

Register us as being in favor of black bees for comb honey; and the American Bee Journal for our guide. R. V. GOSS.

Walker Co., Ala., Aug. 3.

A Fine White Clover Flow.

The white clover honey-flow was fine, although a good deal of rain and bad weather have been sandwiched in. Had we gotten through the winter with strong colonies, or if we had even had fair weather to build up

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Long Tongues Valuable
South as well as North.

How Moore's strain of Italians roll in the honey down in Texas.

HUTTO, TEX., Nov. 19, 1902.

J. P. MOORE.—Dear Sir:—I wish to write you in regard to queens purchased of you. I could have written sooner, but I wanted to test them thoroughly and see if they had those remarkable qualities of a three-banded Italian bee. I must confess to you I am more surprised every day as I watch them. They simply "roll the honey in." It seems that they get honey where others are idle or trying to rob; and for gentleness of handling, I have never seen the like. Friend E. R. Root was right when he said your bees have the longest tongues; for they get honey where others fail. I will express my thanks for such queens. I am more than pleased. I will stock my out-apiaries next spring with your queens.

Yours truly, HENRY SCHMIDT.

The above is pretty strong evidence that red clover is not the only plant which requires long-tongue bees to secure the greatest quantity of nectar.

Daughters of my 23-100 breeder, the prize-winner, and other choice breeders: Untested, 75 cents each; six, $4 00; dozen, $7.50. Select untested, $1.00 each; six, $5.00; dozen, $9.00. Safe arrival and satisfaction guaranteed. Circular free. I am filling all orders by return mail, and shall probably be able to do so till the close of the season.

J. P. Moore, L. Box 1, Morgan, Ky.
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QUEENS.

BROTHER BEE-KEEPERS:
I thank you for the many orders I received this year. I have 700 Nuclei, and can send 3 or 5 banded Queens by return mail. During August, for 60 cents each; 6 for $3.50; 12 for $6.90. Tested—$1.00 each; Breeders, $3.00 each. My bees are of the very best strains. You cannot get any better at any price. I make a specialty of queen-rearing.

This ad will not appear again. Remit by Postal Money Order.

DANIEL WURTH,
33A1t Karnes City, Karnes Co., Texas.

WARM YOUR HOUSE
at low cost by using the LEADER Steel Furnace. Saves coal, time, trouble. Send for free booklet No. 17
Hess Warming and Ventilating Co., Chicago. Ill.

Please mention Bee Journal when writing.

$5 TO START YOU IN BUSINESS
We will present you with the first $5 you take in to start you in a good paying business. Send 10 cents for full line of samples and directions how to begin.
DRAPER PUBLISHING CO., Chicago, Ills.

Please mention Bee Journal when writing advertisers.

REMARKABLE The Universal Satisfaction our QUEENS do give...

STERLING, GA., June 29, 1903.

I was showing my father yesterday how my bees, which I bought from you, were out-working everything in my apiary. Send me 4 Buckeye Red Clover and 2 Muth Strain Golden Italians. I will order more after next extracting.

THOS. H. KINCADE.

Buckeye Strain Red Clover Queens. They roll in honey, while the ordinary starve.
Muth Strain Golden Italians—NONE SUPERIOR. .·. Carniolans—NONE BETTER.

Untested, 75c each; 6 for....................$ 4.00
Select Untested, $1.00 each; 6 for.......... 5.00
Tested, $1.50 each; 6 for....................$ 7.25
Select Tested, $2.50 each; 6 for............ 12.00
Best money can buy, $3.50 each.

Send for Catalog of BEE-SUPPLIES; complete line at manufacturer's prices.

The Fred W. Muth Co.,
Front and Walnut, - CINCINNATI, OHIO.

from spring, we would have had a "bumper" crop. The quality is excellent.

I have been kept constantly "at the post" early and late. I feared overstocking my pasturage here at home, and took 25 colonies to another yard 6 miles away, but it would have been better to have kept them here until after the white clover flow weakened, which is about now. I have 110 colonies here, and will move some of them out to other yards to fill up for winter stores, in place of feeding them sugar, as I did last fall. T. W. HALL.

Sioux Co., Iowa, Aug. 1.

Exceptionally Good Season.

Last season I started with 5 colonies in box-hives, 2 of which I transferred to frame-hives before they swarmed. The 3 not transferred early in the spring gave me 8 good swarms, and the last one on June 10, 20 days after each box-hive colony cast the first swarm. I transferred them to standard or Simplicity hives, and now have 13 colonies, all in good condition. Some of the prime swarms are now working in the third super, and may need more room in a week or two, if the honey-flow continues. It has been exceptionally good this season.

H. A. SCHOPPENHORST.

Warren Co., Mo., July 27.

Best Season In 10 Years.

This is the best honey season we have had in 10 years. My best colonies have given me 200 pounds each of extracted honey up to this date. I have tried for comb honey, averaging also 100 pounds each.

Although northern Michigan is better adapted to the production of extracted than comb honey, I have mastered this problem with the aid of more experienced apiarists.

GEORGE J. MOLONEY.

Cheboygan Co., Mich., July 22.

A Theory on Queen-Rearing.

I have been much interested in the discussions in the American Bee Journal on queen-rearing. I have made a special study on that line for several years, and have had some experience in rearing queens artificially. Like Mr. Geo. B. Whitcomb, on page 475, I have a theory. Although he was loaded with smokeless powder, I think he missed the mark entirely. Now, I will not use any powder, but will just hand in my theory, and the readers of the "Old Reliable" can compare it with Mr. Whitcomb's.

We will suppose a colony of average strength; take them from their winter quarters the first of April; the bees begin gathering pollen, they have plenty of stores, and the queen quickly fills the comb within the cluster with brood. Now about this time the brood hatches. The weather being warmer, the bees gathering from fruit-bloom, the queen is soon laying at her full capacity, and soon has all the empty comb occupied, and now she must stop laying so rapidly there will not be so many larvæ for the nurse-bees to feed. There is an over-supply of royal jelly, and the young bees are hatching by the thousands, with practically nothing to do, as there are several nurses for every larva. Now is the time, if the weather is favorable, that they will make preparation to swarm, and will rear good queens either naturally or artificially, for the reason that they have an over-supply of nurse-bees and royal food. It makes no difference about the size of the hive, so that it is full of bees in the above condition. If the weather is warm, and a good flow of honey, you will get good queens.

Now about the laying worker: I think any time when a colony has an over-supply of nurse-bees, that they sometimes feed some of the larvæ more royal food, or feed for a longer time, than they should to develop a worker; and if the colony becomes hopelessly queenless one or more of these over-fed bees will try to perpetuate the colony, setting herself up as a queen, and laying eggs. I do not believe that there is any difference in the eggs of a queen, they are all fully developed eggs.

Now, we will suppose that we have a colony with the above conditions reversed, that is, the number of nurse-bees are too few to properly feed the young larvæ, and some of them are stinted or weaned too soon. Now, what will be the consequences? I have a theory (but I am not very sure about it yet), that when those underfed bees hatch they will have paralysis. C. P. McKinnon.

Marshall Co., Iowa, Aug. 4.

Single Blessedness Not Encouraged Longer.

With the help of my 13-year-old son I am looking after 235 colonies of bees. I do all of my own house-work. Strange for a man to talk so, isn't it? Well, I have done so for 11 years, and never until this summer have I so badly felt the need of a "queen" in the kitchen. Just imagine a man baking light bread, and it almost ready to go in the oven, and 115 swarms of bees out at one and the same time. Well, as a bee-keeper, I won't encourage single blessedness any longer.

This (Delta) county will have only a medium crop of honey, but it is of excellent quality. It has been the worst season for swarming in years, and it seemed almost out of the question to stop it.

Since reading the Bee Journal, this summer, I have come to the conclusion that a man can not be up-to-date who does not take one or more good bee-papers.

There are some questions I want to discuss with my brother bee-keepers when I get time in the near future, as it better prepares us for successful work. W. S. Beverlin.

Delta Co., Colo., July 23.

A Report from Nebraska.

In 1902 I increased from 9 to 22 colonies, because I did not know how to prevent it. After reading the "Old Reliable" I wintered the 22 colonies successfully, coming out last spring all strong excepting 2 colonies that were weak and queenless. I united them with 2 other colonies, leaving 20 colonies for 1903. I have not had a swarm, and hope to finish the season without increase.

I have kept bees eight years, and this is the first year I have studied their needs. I just begin to see what could have been stored by a few colonies well cared for had I taken a bee-paper and read it.

No farm should be without a few colonies of bees, even 2 or 3. Keep them contented with plenty of ventilation, some shade and foundation when needed, and you will have a pure sweet for the table.

Do not neglect to subscribe for some good bee-paper, then take time to read it, advertisements and all. The successful farmer reads one or more good fárm papers. Why not the bee-keeper?

The bees have had one continual picnic since white clover commenced to bloom, and the second crop of alfalfa was left standing until the winter wheat and early oats were in the shock, much to the joy of the busy bee.

The honey crop in Platte county for 1903 will be a fair one. Extracted slow, and comb honey in quick demand.

Let us hear from more Nebraska bee-keepers. S. P. Drinnin.

Platte Co., Nebr., Aug. 1.

Cause of Loss of Queens.

After reading the item on "Bees Carrying Queens Out," I think I can give the correct cause. I think they killed the queens.

Last spring I lost several queens, and will give the cause of their loss. Out of a house-apiary containing 19 Danz. hives I lost 5 colonies and 6 queens, 4 of the colonies dwindling after their queens were lost.

During the early rains the packing got wet, and I removed it. I then discovered that cleats nailed on the inside of the hive kept the covers from fitting on tightly, and the chaff cushions on top of the brood-nest got in a bad condition. I concluded to remove the cleats, and in doing so jarred the hives, causing some of the colonies to ball their queens. The cover of the hive was heavy, and in removing it and placing it back on caused considerable jarring.

A bee-keeping friend told me of an experiment he once tried. Going to a strong colony he struck the hive one blow with a hammer. Upon examining the colony a little later he found the queen had been killed.

Be very careful not to jar the hives during early spring, especially in removing them from the cellar, or in case it is necessary to handle the frames. With fixed frames special care must be exercised or else you will lose more or less of your queens.

A. G. Young.

Cattaraugus Co., N. Y., July 30.

Tennessee Queens.

Daughters of Select Imported Italian, Select long-tongued (Moore's), and Select, Straight 5-band Queens. Bred 3¼ miles apart, and mated to select drones. No bees owned within 2½ miles; none impure within 3, and but few within 5 miles. No disease. 30 years' experience. WARRANTED QUEENS, 60 cents each; TESTED, $1.25 each. Discount on large orders.

Contracts with dealers a specialty. Discount after July 1st

Send for circular.

JOHN M. DAVIS,
9A26t SPRING HILL, TENN.

SHEEP MONEY IS GOOD MONEY and easy to make if you work for us. We will start you in business and furnish the capital. Work light and easy. Send 10 cents for full line of samples and particulars.
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Hives, Sections, Foundation,
etc. We can save you money. Send list of goods wanted and let us quote you prices. ROOT'S GOODS ONLY. Send for Catalog.
M. H. HUNT & SON, Bell Branch, Mich.

For Sale Will sell from 10 to 50 Colonies of Bees in Dovetailed Hives.
Bees and Hives in good condition.
33A1t **J. C. REAGOR, Shelbyville, Tenn.**

BINGHAM'S PATENT Smokers
25 years the best.
Send for Circular.
25Atf **T. F. BINGHAM, Farwell, Mich.**

Business Queens,
Bred from best Italian honey-gathering stock, and reared in FULL COLONIES by best known methods. Guaranteed to be good Queens and free from disease. Untested, 75c each; 6, $4.00. Tested, $1.25 each.

CHAS. B. ALLEN,
8Atf Central Square, Oswego Co., N. Y.

FREE FOR A MONTH....
If you are interested in Sheep in any way you cannot afford to be without the best Sheep Paper publlahed in the United Statea.

Wool Markets and Sheep
haa a hobby which la the aheep-breeder and hia industry, firat, foremost and all the time. Are you interested? Write to-day.

WOOL MARKETS AND HEEP. CHICAGO. ILL.

Dittmer's Foundation!
Retail and Wholesale.

This foundation is made by a process that produces the superior of any. It is the cleanest and purest. It has the brightest color and sweetest odor. It is the most transparent, because it has the thinnest base. It is tough and clear as crystal, and gives more sheets to the pound than any other make.

Working wax into Foundation for Cash a Specialty. Beeswax always wanted at highest price.

Catalog giving FULL LINE OF SUPPLIES with prices and samples, FREE on application.

E. Grainger & Co., Toronto, Ont.,
Sole Agents for Canada.

GUS. DITTMER, Augusta, Wis.

Queens Now Ready to Supply by Return Mail

Stock which cannot be excelled. Each variety bred in separate apiaries, from selected mothers; have proven their qualities as great honey-gatherers.

Golden Italians Have no superior, and few equals. Untested, 75 cents; 6 for $4.00.

Red Clover Queens, which left all records behind in honey-gathering. Untested, $1.00; 6 for $5.00.

Carniolans—They are so highly recommended, being more gentle than all others. Untested, $1.00.

ROOT'S GOODS AT ROOT'S FACTORY PRICES.

C. H. W. WEBER, 2146-2148 Central Avenue,
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(Successor to Chas. F. Muth and A. Muth.)

BEE-BOOKS

SENT POSTPAID BY

GEORGE W. YORK & CO.,

144 & 146 E. Erie St., - CHICAGO, ILL

Forty Years Among the Bees, by Dr. C. C. Miller.—This book contains 328 pages, is bound in handsome cloth, with gold letters and design; it is printed on best book-paper, and illustrated with 112 beautiful original half-tone pictures, taken by Dr. Miller himself. It is unique in this regard. The first few pages are devoted to an interesting biographical sketch of Dr. Miller, telling how he happened to get into bee-keeping. Seventeen years ago he wrote a small book, called "A Year Among the Bees," but that little work has been out of print for a number of years. While some of the matter used in the former book is found in the new one, it all reads like a good new story of successful bee-keeping by one of the masters, and shows in minutest detail just how Dr. Miller does things with bees. Price, $1.00.

Bee-Keeper's Guide, or Manual of the Apiary, by Prof. A. J. Cook, of Pomona College, California. This book is not only instructive and helpful as a guide in bee-keeping, but is interesting and thoroughly practical and scientific. It contains a full delineation of the anatomy and physiology of bees. 544 pages. 295 illustrations. Bound in cloth. 19th thousand. Price, $1.20.

Langstroth on the Honey-Bee, revised by Dadant.—This classic in bee-culture has been entirely re-written, and is fully illustrated. It treats of everything relating to bees and bee-keeping. No apiarian library is complete without this standard work by Rev. L. L. Langstroth—the Father of American Bee-Culture. It has 520 pages, bound in cloth. Price, $1.20.

A B C of Bee-Culture, by A. I. & E. R. Root.—A cyclopedia of over 500 pages, describing everything pertaining to the care of the honey-bees. Contains about 400 engravings. It was written especially for beginners. Bound in cloth. Price, $1.20

Scientific Queen-Rearing, as Practically Applied, by G. M. Doolittle.—A method by which the very best of queen-bees are reared in perfect accord with Nature's way. Bound in cloth and illustrated. Price, $1.00; in leatherette binding, 60 cents.

Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—It is nicely illustrated, contains 160 pages. Price, in cloth, 75 cents; in paper, 50 cents.

Advanced Bee-Culture, Its Methods and Management, by W. Z. Hutchinson.—The author of this work is a practical and entertaining writer. You should read his book; 90 pages; bound in paper, and illustrated. Price, 50 cents.

Bienen-Kultur, by Thomas G. Newman.—This is a German translation of the principal portion of the book called "Bees and Honey." 100-page pamphlet. Price, 25 cents.

Apiary Register, by Thomas G. Newman.—Devotes two pages to a colony. Leather binding. Price, for 50 colonies, $1.00.

Dr. Howard's Book on Foul Brood.—Gives the McEvoy Treatment and reviews the experiments of others. Price, 25 cents.

Winter Problem in Bee-Keeping, by G. R. Pierce.—Result of 25 years' experience. Price, 30 cents.

Foul Brood Treatment, by Prof. F. R. Cheshire.—Its Cause and Prevention. 10 cts.

Foul Brood, by A. R. Kohnke.—Origin, Development and Cure. Price, 10 cents.

Close Saturdays a 1 p.m.—Our customers and friends will kindly remember that beginning with July 1, for three months we will close our office and bee-supply store at 1 p.m. on Saturdays. This is our usual custom. Nearly all other firms here begin the Saturday afternoon closing with May 1st, but we keep open two months later on account of the local bee-keepers who find it more convenient to call Saturday afternoons for bee-supplies.

National Convention Notice.

The 34th Annual Convention of the National Bee-Keepers' Association will be held in Los Angeles, Calif., on August 18, 19, and 20, 1903, in Blanchard's Hall, at 235 S. Broadway. The headquarters of the Association during the convention will be at the Natick House, corner of First and Main Streets.

It is expected that this will be the largest and best convention ever held by the bee-keepers of America. Every one interested in the production of honey should be present, if at all possible. Besides the question-box, which will be one of the special features of the program, the following subjects will be discussed in papers by the prominent bee-keepers mentioned. Afterward a free and full discussion will be had by all in attendance who wish to participate. The subjects and men to introduce them are as follows:

"Honey Exchanges and Co-operation Among Bee-Keepers" by Prof. A. J. Cook, Claremont, Calif.

"How to Make Money Producing Extracted Honey," by J. F. McIntyre, Sespe, Calif. Response by E. S. Lovesy, Salt Lake City, Utah.

"The Production and Sale of Chunk Honey," by Homer H. Hyde, Floresville, Texas. Response by C. P. Dadant, Hamilton, Ill.

"The Eradication of Foul Brood," by N. E. France, Platteville, Wis.

"Reminiscences of Bee-Keeping and Bee-Keepers in the Early Days," by A. I. Root.

There will be reports by the officers, which include Pres. Hutchinson, General Manager France, and Secretary York.

The California bee-keepers are planning to give all in attendance one of the grandest receptions imaginable on the first evening, Tuesday, Aug. 18. No one will want to miss this feature of the convention.

It is an opportunity of a lifetime to take the trip to California, as all convention members can avail themselves of the low railroad rates, as it comes at the time of the Grand Army meeting in San Francisco, and the same rates apply to Los Angeles.

For further information or particulars that may be desired, address the Secretary, 144 E. Erie St., Chicago, Ill.

GEORGE W. YORK, *Sec.*
W. Z. HUTCHINSON, *Pres.*

BEE-SUPPLIES!
ROOT'S GOODS
AT ROOT'S PRICES.
Everything used by bee-keepers.
POUDER'S HONEY-JARS. Prompt service. Low Freight Rates.
NEW CATALOG FREE.
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Ready to fill orders for ITALIAN QUEENS from stock that for hardiness and good working-qualities is second to none. M.O. Office, Cleveland, Tenn.

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BOYS **WE WANT WORKERS** Boys, Girls, old and young alike, make money working for us. We furnish capital to start you in business. Send us 10c stamps or silver for full instructions and a line of samples to work with. DRAPER PUBLISHING CO., Chicago, Ill.

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HONEY AND BEESWAX

MARKET QUOTATIONS

CHICAGO, Aug 7.—Consignments of the new crop are coming to commission houses that have not had honey for years past, and as there is not any consumptive demand they are finding difficulty in disposing of it. Under such conditions it is hardly possible to give accurate prices, as some merchants ask 10 cents for honey that others hold at 15 cents. The prices given in our last quotations are asked, but feeling is unsettled. Beeswax steady at 30c.

KANSAS CITY, July 28—Some new comb honey in market, but on account of hot weather the demand is not heavy, but will be getting better every day. Fancy white comb, 24 sections, per case, $3.50; No. 1, white and amber, 24 sections, per case, $3.25; No. 2, white and amber, 24 sections, per case, $3.00. Extracted, white, per pound, 6@6½c; amber, 5½c. Beeswax, good demand, 25@30c. C. C. CLEMONS & CO.

ALBANY, N. Y., July 18.—We are receiving some shipments of new comb honey, mostly from the South; the demand light as yet; we are holding at 15@16c. Extracted slow at 6@7c. The crop of honey in this vicinity is very light, and we shall have to depend upon other sections more than ever for our supply of honey. Beeswax, 30@32c. H. R. WRIGHT.

CINCINNATI, Aug. 6—The supply about equals the demand for extracted honey. We are selling amber extracted in barrels from 5½@6½c, according to quality. White clover, barrels and cans, 7@8 c, respectively. Comb honey, fancy, in no drip shipping cases, 16@16½ cents. Beeswax, 30c. THE FRED W. MUTH CO.

NEW YORK, July 8.—Some new crop comb honey now arriving from Florida and the South, and fancy stock is in fair demand at 14c per pound, and 12@13c for No. 1, with no demand whatever for dark grades.

The market on extracted honey is in a very unsettled condition, with prices ranging from 5@5½c for light amber, 5½@6½c for white, and the common Southern at from 50@55c per gallon. Beeswax steady at from 30@31c.

HILDRETH & SEGELKEN.

CINCINNATI, July 20.—The demand for honey continues slow. New extracted and comb begins to be offered largely. Prices show a downward tendency. Extracted sells at the following prices: Amber in barrels, 5@5½c; alfalfa, 6½c; white clover, 7@7½c. Comb honey, fancy water-white, will bring 14@15c; no demand for lower grades. Beeswax, 27@30c.

C. H. W. WEBER.

SAN FRANCISCO, July 22.—White comb honey, 11½@13½c; amber, 8@10c. Extracted, white, 5¼@5 c; light amber, 4¾@5c; amber, 4¼@4½c; dark, 3¾@4¼c. Beeswax, good to choice, light, 27½@29c; dark, 25@26c.

This season's crop is not only unusually late, but is proving much lighter than was generally expected. While the market is unfavorable to buyers, the demand at extreme current rates is not brisk and is mainly on local account.

WANTED! Extracted Honey.

Send sample and best price delivered here; also Fancy Comb wanted in no-drip cases.

THE FRED W. MUTH CO.
32Atf Front and Walnut, CINCINNATI, OHIO.

WANTED—Comb Honey in quantity lots. We are perhaps the only dealers in this article owning as much as 150,000 pounds at one time. Please state quantity, quality and price asked for your offerings. Thos. C. Stanley & Son,
24Atf MANZANOLA, COLO., or FAIRFIELD, ILL.

WANTED—Extracted Honey.

Mail sample and state lowest price delivered Cincinnati. Will buy FANCY WHITE COMB HONEY, any quantity, but must be put up in no-drip shipping-cases.

C. H. W. WEBER,
2146-48 Central Ave., CINCINNATI, OHIO.
24Atf Please mention the Bee Journal.

WANTED!

TO BUY—White Clover Comb and Extracted HONEY—also Beeswax. Spot cash. Address at once, C. M. SCOTT & CO.
33Atf 1004 E. WASH. ST., INDIANAPOLIS, IND.

Please mention Bee Journal when writing

The Best Bee-Goods in the World....

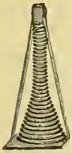
are no better than those we make, and the chances are that they are not so good. If you buy of us **you will not be disappointed. We are undersold by no one.** Send for new catalog and price-list and free copy of THE AMERICAN BEE-KEEPER; in its thirteenth year; 50 cents a year; especially for beginners.

—THE—
W. T. Falconer Mfg. Co.,
JAMESTOWN, N. Y.

W. M. GERRISH, Epping, N.H., carries a full line of our goods at catalog prices. Order of him and save the freight.

Please mention Bee Journal when writing.

Queen-Clipping Device Free!



The MONETTE Queen-Clipping Device is a fine thing for use in catching and clipping Queens' wings. It is used by many bee-keepers. Full printed directions sent with each one. We mail it for 25 cents; or will send it **FREE** as a premium for sending us **One** New subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device. Address,

GEORGE W. YORK & CO.,
144 & 146 E. Erie St., - CHICAGO, ILL.

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—IN—
SOUTHERN LANDS.

Such investments are not speculative. The South is not a new country. Market and shipping facilities are adequate and first-class. The climate is mild and favorable. Notwithstanding these and other advantages, Southern lands are selling for prices far below their real value, and at present prices net large returns on the investment. For a free set of circulars, Nos. 1 to 10, inclusive, concerning the possibilities of lands in Kentucky, West Tennessee, Mississippi and Louisiana, on and near the Illinois Central Railroad, for homeseekers and investors, address the undersigned,

A. H. HANSON, G. P. A., Chicago.
26A12t Please mention the Bee Journal.

I ARISE

To say to the readers of the BEE JOURNAL that

DOOLITTLE...

is now up with orders, so he can send Queens from his choice honey-gathering stock, by return mail, at the following prices:

1 Untested Queen	$1.00
3 Untested Queens	2.25
1 Tested Queen	1.25
3 Tested Queens	3.00
1 select tested queen	1.50
3 " " Queens	4.00
Extra selected breeding, the very best	5.00

Circular free, giving particulars regarding each class of Queens, conditions, etc. Address,

G. M. DOOLITTLE,
29Dtf Borodino, Onondaga Co., N. Y.
Please mention Bee Journal when writing

26th Year **Dadant's Foundation** 26th Year

We guarantee Satisfaction. What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS. PATENT WEED-PROCESS SHEETING.

Why does it sell so well? Because it has always given better satisfaction than any other. Because in 25 years there have not been any complaints, but thousands of compliments.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

Bee-Keepers' Supplies OF ALL KINDS *****

Very fine pure-bred BARRED PLYMOUTH ROCK Chickens and Eggs for sale at very low prices.

Langstroth on the Honey-Bee—Revised,
The classic in Bee-Culture—Price, $1.20, by mail.

BEESWAX WANTED at all times.

DADANT & SON,
Hamilton, Hancock Co., Ill

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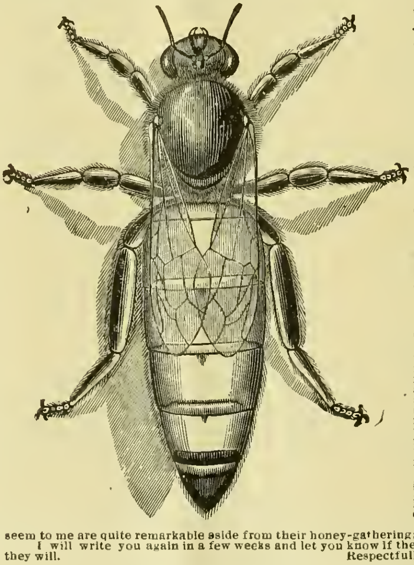
RED CLOVER HONEY-QUEENS.



SPRING BLUFF, WIS., July 18, 1903.
THE A. I. ROOT CO., Medina, Ohio.

Dear Sirs:—I thought I would write you a few lines in regard to the Red Clover Queen I got from you. They haven't swarmed yet this summer, but I have taken 48 sections from them and there is 24 more all ready to come off.

Just think, 72 nice sections of as nice honey as ever was made, and only July 18th. It seems as though they will surely fill 48 more.

I don't know whether their tongues are any longer than any of the others, or whether they gathered it from Red Clover, but surely such bees are worth money.

I use the 8-frame Jumbo frame.

C. E. KELLOGG.

C. E. KELLOGG, Spring Bluff, Wis.

Dear Sir:—We have yours of July 18th and would be glad to have you advise us by return mail with reference to the capping of the honey. Some parties say the capping from these bees is not white, and we would be glad to have you advise us how your honey is in this respect, and oblige, Yours truly,

THE A. I. ROOT CO.

SPRING BLUFF, WIS., July 31, 1903.
THE A. I. ROOT CO., Medina, Ohio.

Dear Sirs:—Yours of July 24th at hand to-day. In regard to your question in reference to the cappings of the honey from these bees I will say that it is simply perfect, beautiful snow-white and every box perfect. 96 one-pound sections now. I am quite sure they will fill two more supers, which will bring the number up to 144. I would like very much to have you see a few of those sections, and I will be glad to send you a few.

Now, I haven't told you ALL their good qualities yet. I am sure they are by far the most gentle bees to handle I have. I could take off the sections without smoke or veil without getting stung.

There are a few traits about them that seem to me are quite remarkable aside from their honey-gathering; they don't seem to want to swarm.

I will write you again in a few weeks and let you know if they fill the 144 sections, which I am sure they will.

Respectfully, C. E. KELLOGG.

AGAIN READY FOR PROMPT DELIVERY.

We were snowed under with orders for a few weeks, but here we are again with good Queens and prompt service.

Red Clover and Honey Queens.

	Each.	Six.
Untested	$1.00	$ 5.70
Tested	2.00	11.40
Select Tested	3.00	17.10

	Each.
Breeding	$ 5.00
Select Breeding	7.50
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With any of the last three we include one frame of bees and brood to insure safe arrival, for which we make no charge. These must be sent by express. Queen circular free.

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AMERICAN BEE JOURNAL

43d Year. CHICAGO, ILL., AUG. 20, 1903. No. 34.

WEEKLY

APIARY OF R. H. JEURS, OF NEW SOUTH WALES, AUSTRALIA.
(See page 532.)

THE AMERICAN BEE JOURNAL

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GEORGE W. YORK.

DEPT. EDITORS,
Dr. C. C. Miller, E. E. Hasty, Emma M. Wilson

IMPORTANT NOTICES.

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Objects of the Association:

1st.—To promote the interests of its members.
2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

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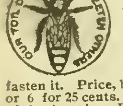
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ESTABLISHT IN 1861
AMERICAN
BEE JOURNAL
THE OLDEST BEE-PAPER IN AMERICA

43d YEAR. CHICAGO, ILL., AUG. 20, 1903. No. 34.

Editorial Comments

Queen-Nurseries for Honey-Producers.—Queen-rearing is quite a business by itself, and the man who makes a business of rearing queens to sell can afford to use plans and appliances not generally used by one who rears queens only for his own use. Yet if the importance of having best queens were felt as fully as it should be, the average honey-producer would in his plans and appliances probably come nearer the commercial queen-rearer than he now does. Probably few honey-producers use anything in the line of a queen-nursery, but it might be an advisable thing to do for any one with 50 or more colonies.

Queen-cells nearly mature are put in a queen-nursery where the young queens may emerge from their cells and still be confined separately, and then instead of a queen-cell, a virgin queen may be given to a nucleus or a colony. There are advantages in this. The cell may contain a dead larva, or it may contain a young queen with defective wings, making her worthless. No loss can occur from either of these causes if the young queens be allowed to emerge in a nursery. A good cell is sometimes torn down by the bees, and as a young queen is not always easily found, days may be wasted by the bee-keeper awaiting the laying of the queen when no queen is present, for he can not always tell by the look of the cell whether a queen has emerged from it or not. It is a nice thing to have a few virgin queens on hand for emergencies, and with a nursery a number can be kept in one hive, but without the nursery only one can be thus kept.

A friend who rears queens only for his own use says he would use a nursery if he never used queen-cells except by taking them from colonies that had swarmed. He has used with satisfaction both the Pridgen and the Stanley. The Pridgen has the advantage that there is no possibility of the bees getting at the cells to destroy them, and a cell may have quite a hole in it and yet hatch out all right. Neither can a queen ever get out of its own compartment, as it sometimes does in the Stanley. The Stanley has the advantage that being made of excluder-zinc the bees can get to the cells as freely as if they were on the combs. A cartridge containing a young queen can also be taken out separately to be taken elsewhere, whereas with the Pridgen the young queen must be allowed to come out of its compartment before it can be taken elsewhere.

Comb vs. Foundation.—In a previous issue of this journal, Adrian Getaz suggests the prevention of swarming by taking out of each colony every few days a frame of brood, and replacing it with a frame of foundation, saying that empty comb will not answer the purpose, as "the bees would often fill it with honey before the queen could lay in it." In one of the two-men conventions held by Editor Hill and O. O. Poppleton, as reported in the American Bee-Keeper, this matter came under discussion, and Mr. Hill says:

> It will be noted that Mr. Getaz advocates the use of foundation in preference to a brood-comb because of the additional advantage thus secured by the queen. Here is where Mr. Getaz and Mr. Poppleton collide. According to the experience of the latter gentleman, either a sheet of foundation or a comb which had never been used for breeding purposes, are effectual barriers to the queen's progress—acting, in fact, somewhat as a division-board would do in dividing or restraining the brood-nest, according to the position occupied by the said new combs or foundation; whereas, if given a brood-comb which has been formerly used for breeding purposes, she is quick to avail herself of the opportunity to extend her egg-laying operations. It is understood that during the height of the season, when brood-rearing is being pursued strenuously, the queen will quite readily take to "any old thing" in the way of combs, whether old or new, or whether full sheets or starters are used; but the point is, the queen's individual interests are greatly assisted by the use of old brood-combs, under all circumstances.

"When" two such "doctors disagree, who shall decide?" It is very certain that at least sometimes, when a frame or two frames of empty comb are given to the bees in the time of harvest, those combs will be filled with honey before the queen could have the time to fill them with eggs. That does not, however, leave it a foregone conclusion that in all cases this filling of honey into the combs would be an effectual bar to their use by the queen. The question is whether, when the combs are thus filled by honey, the bees will again empty it out as fast as needed by the queen.

Mr. Hill urges that the queen prefers old comb in which to lay; Mr. Getaz, that the bees prefer old combs in which to store honey; both are no doubt correct; the practical question remains, Will a frame of foundation or one of drawn comb do most toward the prevention of swarming? If a frame of drawn comb and one of foundation were given side by side, would that help to settle it?

Bee-Paralysis Reconsidered.—The following note has been received from Dr. Miller:

> Mr. Editor:—I take pleasure in forwarding to you a letter received from O. O. Poppleton, and although intended only as a private letter, it is of such general interest that I am sure my good friend, Mr. Poppleton, will forgive me for giving it entire to your readers.
>
> I must thank Mr. Poppleton for calling attention anew to his method of cure, and ask his pardon that in the press of affairs it was not given the attention it fully deserved. Mr. Poppleton is a man of much and varied experience, whose word is entitled to thorough credit, and it is to be regretted that of late years we see so little from his pen.
>
> C. C. Miller.

The letter of Mr. Poppleton referred to reads as follows:

> Dade Co., Fla., July 11, 1903.
>
> Dr. C. C. Miller, Marengo, Ill.—
>
> My Dear Friend:—Will you grant me the privilege of hinting at a change which ought to be made in some of the answers to questions you have made within the last few months? I refer to the idea that there is no cure known for bee-paralysis, etc. See your answers in the American Bee Journal for June 4 and June 11, 1903. E. R. Root makes the same statement in a still more positive manner. See Gleanings for Aug. 15, 1902, page 679; for Sept. 1, page 720; Feb. 15, 1903, page 160; and May 1, page 396.
>
> There *is* a certain cure known for the disease—one described by myself several years ago in the Review, and a couple years ago in the American Bee-Keeper. I enclose a copy of the latter, which you will see touches on all the points raised by inquirers and writers in the American Bee Journal and Gleanings within the last few weeks.
>
> Please notice how extensive my experiments were—some 40 or 50 cases cured with considerably over a hundred untreated cases under observation; also the careful, thorough manner of conducting the experiments, by treating only a few cases at a time, and comparing them with other still untreated cases; then treating a few more at a time, and so on until all were cured. The result of this careful work was that every treated colony recovered in about the same number of days after treatment, while *all* the others remained diseased until treated. Handling as directed in the article prevents all loss of brood or brood-combs, and is a very important point.
>
> If the condition of my eyes would allow, I would gladly write an article on this subject for either of the papers, which would fully answer all the inquiries lately made. In lieu of that I thought that perhaps calling your attention to what is already in print would give you a chance to help any future inquiries.

This is not written for publication, simply for your future use, if ever needed.

The coming meeting of our Association at Los Angeles, Calif., comes so early in the season that it is impossible for me to get away to attend it. I am much disappointed, but it can not be helped. We have three distinct flows of honey here in South Florida—winter, spring, and summer. The first and last are almost total failures this year, while the spring flow was extra good. The crop, as a whole, the poorest I have had in years—probably a little less than 100 pounds per colony.
O. O. POPPLETON.

P. S.—I think the many failures reported in the use of sulphur is simply because it wasn't rightly applied. Everything, to succeed, has to be done rightly.
P.

On another page of this number will be found an article written by Mr. Poppleton for the American Bee-Keeper of April, 1901, which gives in full his treatment of the disease.

One of the strange things about bee-paralysis is the very great difference of opinion as to its importance. Some view it as a much-dreaded scourge, while others think it scarcely deserving attention. And with reason. In the North it appears in a mild form, seldom affecting any considerable number of bees, always disappearing of itself, while in the South it is a very serious matter. Having lost from it "about 15,000 pounds of honey, and quite a number of colonies of bees," Mr. Poppleton can certainly not consider it a matter for light consideration in Florida, where he now lives.

For the benefit of the novice, it may be well to mention briefly the signs by which the disease may be recognized. Some of the bees of a colony will be found on the alighting-board trembling as with the shaking palsy. Then they become somewhat swollen, and are black and shining from the removal of their plumage, perhaps caused by the abuse of the other bees which drive them from the hive; and later they stagger off upon the ground to die. If you find this condition of affairs in the North, you need scarcely give the matter a second thought; it amounts to but little, and in all probability will disappear of itself, perhaps to return in a short time, perhaps not at all. But if in the South, it will be well to give it immediate attention, and it will be well to apply thoroughly Mr. Poppleton's plan of cure *exactly as he gives it.*

Bees Feeding Each Other.—On another page appears an article from Arthur C. Miller, referring to some remarks made on page 467. The bump of veneration seems to be poorly developed in Mr. Miller, if not entirely lacking. No matter how hoary with age may be any tradition of the fathers, before accepting it as truth he insists that it must have the endorsement of the bees, just as much as if it were a belief uttered only yesterday.

It will be noticed that some care was taken not to come into very violent conflict with Mr. Miller's statements, chiefly a few questions asked. And with the same continued caution some questions may be mentioned that might be asked by some one anxious to defend the traditions of the fathers. Mind you, it need not necessarily be understood that in this quarter any doubt is entertained as to the impregnability of Mr. Miller's position; just a suggestion of questioning that might arise in the mind of one accustomed to cherishing the old traditions. Some of those questions might be the following:

When bees appear to be caressing the queen, but are not caressing her, what are they doing?

When a queen pokes her tongue from the partly opened cell as a feeler, what is she feeling after?

If food always has to be asked for, how does the queen ask for it?

Having mentioned these possible questions, the American Bee Journal might take the responsibility of asking just one question on its own account. In the article in the present number emphasis is put upon the point that food is not given by the tongue, but by the mouth, and the opening sentence gives the impression that in this quarter the opposite view is held. Now the question is: What is there said on page 467 in any way hinting that food is given by the tongue rather than by the mouth?

Amerikanische Bienenzucht, by Hans Buschbauer, is a bee-keeper's handbook of 138 pages, which is just what our German friends will want. It is fully illustrated, and neatly bound in cloth. Price, postpaid, $1.00; or with the American Bee Journal one year—both for $1.75. Address all orders to this office.

The Premiums offered this week are well worth working for. Look at them.

Miscellaneous Items

THE APIARY OF R. H. JEURS, of Australia, as shown on the first page, appears to be a model of neatness. The group of people also are a happy looking company. When sending the picture, Mr. Jeurs wrote as follows:

I have been a subscriber to the "Old Reliable" for about eight years. I have about 600 full colonies and nuclei. I go in for queen-rearing extensively, and all my queens are reared on the Doolittle plan.

This not being a first-class locality, I have not made a record for honey, but it is improving, and a few years ago I thought I was playing up, having gotten 3 tons of honey; later I reached 12 tons, and bid fair to go to 20 or 30 tons.

I have worked up a private demand for my honey, and have thus disposed of 8 tons in one year. By so doing I have made bees pay me.
R. H. JEURS.

NOTICE OF DISSOLUTION.—By mutual agreement the partnership heretofore existing between Charles Mondeng and P. J. Doll, under the name of the Minnesota Bee-Keepers' Supply Manufacturing Co., of Minneapolis, Minn., has been dissolved, Charles Mondeng retiring from said firm. All accounts and bills receivable due the late firm are to be paid to said P. J. Doll, and all accounts and bills payable will be paid by said P. J. Doll. The business will be continued under the old name, and at the same stand.
CHARLES MONDENG.
P. J. DOLL.

A CONVENTION OF TWO.—Perhaps it might be called a series of conventions. That experienced veteran, O. O. Poppleton, each year takes his bees to the vicinity of the Florida home of Editor Hill, of the American Bee-Keeper. This year the bee-business in that region has not been very rushing, and it is only natural that Mr. Poppleton should occupy some of his leisure in making frequent visits to the editorial sanctum. As might be expected when two such men meet, each visit is a veritable bee-convention, and the first pages of the August number of the American Bee-Keeper is occupied with what the editor calls "A Medley," discussing various things apicultural suggested by the reading of this and other journals, making very interesting reading.

Association Notes

The Wilson Co. (Tex.) Association.

Pursuant to a call, the bee-keepers of Wilson, Karnes, Goliad, Atascosa and Bexar counties, Tex., met at the Court House in Floresville, and organized themselves into an association to be known as the Wilson County Bee-Keepers' Association. The following officers were elected: H. H. Hyde, president; J. B. Scott, vice-president; and M. C. West, secretary.

A committee was appointed to draft a constitution and by-laws for the association, and report at next meeting.

On motion, Mr. Homer H. Hyde was nominated and unanimously elected as a delegate to the convention of the National Bee-Keepers' Association at Los Angeles.

The following bee-keepers were present: Louis H. Scholl, L. Stachelhausen, H. Johnson, H. Piper, J. B. Treon, H. H. Hyde, M. C. West, G. F. Davidson, J. M. Bell, J. D. Bell, J. B. Scott, W. W. Davidson, W. T. Brite, W. E. Crandall, W. H. Mathis, W. M. Wingard, J. T. Bell, M. M. Faust, L. Haynes, E. N. Smith, J. M. Forest, Jos. Robinson, and J. H. Kolmeyer.

The convention then adjourned to meet Sept. 3 and 4, 1903.

Organized a Bee-Keepers' Business Association.

In convention at Floresville, Tex., Aug. 7, the bee-keepers of Wilson, Atascosa, Karnes, Goliad and Bexar counties voted to organize themselves into an association for the purpose of assisting the bee-keepers to a better market for their products, and for purchasing and distributing bee-keepers' supplies.

It was voted that the plan of association be modeled after that of the Colorado Honey-Producers' Association, an association of the bee-keepers of Colorado, which has been eminently successful in disposing of the product, and meeting the needs of the bee-keepers of that State.

Books were opened for the subscription of stock in the association, shares to be worth $10 each.

The organization then proceeded to the election of officers, which resulted as follows: Dr. J. B. Treon, president; J. B. Scott, vice-president; and Will M. Wingard secretary.

Adjourned to meet Aug. 21, 1903.

Convention Proceedings

Proceedings of the Texas Bee-Keepers' Convention Held at the A. & M. College, at College Station, July 8 to 10, 1903.

BY LOUIS H. SCHOLL, SEC.

The annual meeting of the Texas Bee-Keepers' Association was called to order by Pres. Udo Toepperwein, at 9 a.m. of July 8.

The first subject of discussion was that of the election of officers for the ensuing term. This, according to the printed program, was to be left toward the close of the meeting, but as some preferred to have the election of officers first, it was, after some discussion, put to a vote, resulting in that the election be proceeded with, and these were elected: President, W. O. Victor; Vice-President, J. K. Hill; and Secretary-Treasurer, Louis H. Scholl.

The following committees were then appointed by Pres. Victor:

A committee of three to revise the Constitution and By-Laws: J. B. Salyer, Louis H. Scholl, H. H. Hyde; and to which was added the name of Prof. E. Dwight Sanderson.

A committee to inspect and to report on the College Experimental Apiary: J. M. Hagood, F. L. Aten, and Udo Toepperwein.

A committee to judge the honey on exhibition: H. H. Hyde, J. F. Teel, and J. K. Hill.

A committee on resolutions: O. P. Hyde, W. H. White, and Z. S. Weaver.

A committee on program for the next meeting: O. P. Hyde.

The next annual meeting of the National Bee-Keepers' Association, to be held at Los Angeles, was discussed for some length, and also what had been done by several of the members of the Texas Association in trying to get that meeting to be held at San Antonio this year. Every effort was used to get the meeting, but as the factor of cheap railroad fare plays the greatest part in the selection of the place of meeting of that Association, and as the meeting of the G. A. R. at San Francisco this year offered such inducements, it was most natural that the National should follow them. That left Texas to come in second. And we are glad of that fact. What we now have for the National is a most urgent invitation to come to Texas with their next meeting—and if that can not be, then we want them to come the next, or the very first chance that they may get. The Texas Bee-Keepers' Association is quite a portion of their body, and we certainly have a right to have them come to meet with us one time, anyway. There are about 70 of us who are members of that great Association, and we are growing in numbers; and we would grow much faster if the Association would only come to Texas once, so that the bee-men of this great State could get better acquainted with it and its objects. We are hoping that we shall see them soon.

The Texas Association will send several delegates to the Los Angeles meeting, viz.: Udo Toepperwein, Louis H. Scholl, and W. O. Victor.

Then the subjects of the regular program were taken up, and Prof. E. Dwight Sanderson, the State Entomologist, addressed the bee-keepers on

APICULTURAL WORK OF THE A. & M. COLLEGE.

First, let me extend you a cordial and hearty welcome as you again assemble here to discuss methods for the improvement of Texas bee-culture. Being charged with the direction of the experimental apiary here, it is with much pleasure that I meet this Association for the first time, to listen to your discussions, and to learn from you those lines of experimental work which will be of most immediate practical value.

The apicultural work of the A. & M. College falls naturally under three heads; viz.: (1) Investigation, (2) Police Work, and (3) Education.

(1) INVESTIGATION.—The experimental apiary, founded through the efforts of this Association and my predecessor, Prof. F. W. Mally, has been undergoing a steady process of development. In a little over a year it is impossible to fully equip such an apiary and secure large results with but part of one man's time devoted to it. Furthermore, it requires time to become familiar with methods suited to the honey-flow of the locality. I feel, therefore, that my former assistant, Mr. Wilmon Newell, has done exceedingly well, in view of the fact that it was possible to devote but a part of his time to this work. We lost his services reluctantly, but were unable to meet the inducements offered elsewhere. Mr. Newell will present the results of his work to you so that any review by me is unnecessary.

It has been apparent for some time that for successful work the entire time of one man should be devoted to apiculture. We have, therefore, secured your secretary, Mr. L. H. Scholl, as assistant and apiculturist, who will give practically his entire time to apicultural work after the present summer.

We have also found that considerable additional equipment is needed at the bee-house. It is our purpose to add another room to the present house, with cellar beneath it, and to secure all necessary apparatus and supplies for the lines of investigation outlined below. For this purpose we have set aside $900—almost double the amount available during the past year. College Station is by no means an ideal place for bee-keeping, and we have found the honey-flow insufficient to supply over 40 colonies at most. This, and other factors, have led us to arrange for two out-yards in the Brazos River bottom, some ten miles from the college, where experiments will be carried on under our direction, but without expense to us. Future lines of investigation proposed by Mr. Scholl and Mr. Newell, many of them already undertaken, may be briefly mentioned as follows:

Comparison of hives and construction of improved and special hives; comparison of races of bees; comparison of methods of management; methods of preventing swarming; methods of running out-yards; studies of the home manufacture and styles of comb foundation; methods and profit of manufacture of vinegar from cheap honey and honey-waste; methods of bottling honey; planting for honey; native honey-plants, etc. These, and other problems which may suggest themselves, will be taken up as fast as feasible. With the additions now contemplated we shall have the best apiary of any agricultural college or experiment station, and the only one, to our knowledge, with an apiculturist. We may, therefore, reasonably expect to secure results of value from these investigations during the next few years, which will be published upon completion.

(2) POLICE WORK.—Through the efforts of this Association, a bill for the suppression and control of foul brood and other diseases of bees was introduced in the 28th Legislature by Hon. Hal Sevier, of Sabinal, to whom we are under many obligations, and finally passed. The law covers the situation quite effectively, but most unfortunately provides no funds for its enforcement. The writer called the attention of the author of the bill and the officers of this Association to the necessity of providing funds for the enforcement of the law if it were to become effective, but without avail. This is to be much regretted, and I believe shows the necessity for further strengthening this Association, both as regards membership and organization, in order that the importance and size of the industry may receive better recognition. But though no funds for the inspection work contemplated by this law are available, its mere enactment is a distinct forward step, and funds for its enforcement can doubtless be provided by the next legislature. Meanwhile we shall endeavor to do all possible toward the enforcement of the law where foul brood is known to exist by correspondence, and will prevent any knowing violations of its provisions as far as possible. This Association can be of the greatest assistance in this work in creating public sentiment in favor of the most thorough treatment of diseased bees. It also seems to me that local or county associations or sections of county farmers' institutes could do much toward the discovery of diseased bees and securing their proper treatment.

(3) EDUCATION.—Two lines of educational work are in our charge—instruction of students at the college in apiculture, and the instruction of farmers and bee-keepers throughout the State by means of literature and talks at farmers' institutes and bee-keepers' conventions. Until the present year no provision was made for instruction in apiculture in the regular agricultural course. It is now an elective study through the senior year, so that all who wish may obtain a full course. Special courses will be given to suit individuals whenever possible. Considerable student labor is also employed at the bee-house, and a boy interested in bees can thus secure a deal of practical knowledge

of them. Our equipment for the instruction of students is undoubtedly the best of any institution in the country. It remains for the bee-keepers of the State to make this branch of our work a success. Send us your boys, and get your neighbors' boys to come to the college for a full agricultural course, or a short course in bee-keeping and special subjects. Perchance older heads may also find it profitable to spend a few months here in study; one of our most enthusiastic students, in the short course in agriculture last winter, had passed three score years and ten. Before many years go by we hope to send out from this institution some bee-keepers who will be a credit to the efforts of this Association, and will do much for bettering the status of Texas apiculture.

We are wont to be proud of the fact that Texas leads all the States in amount and value of bees and their products. I have been studying the statistics of apiculture in Texas and other States as given in the 12th United States Census, and have secured some facts on this subject which may be of interest to you. It seems that Texas bee-keeping is much like the live stock industry with the longhorn steer—large quantity and very little quality. We are proud to number some of the most successful and progressive bee-keepers of the country as Texans; but for every one of these there are a thousand devotees of the old "bee-gum" whose bees and their product vastly increase the quantity, but woefully lower the quality of the apiary products.

First, let us compare the industry of Texas with that of the United States and other States and sections. Bee-keeping is more popular here than in many States. Seventeen percent of our farms have bees, while there are only 12.3 percent of those throughout the United States. But in nearly all other respects Texas stands near the bottom of the list.

The average amount of honey produced on farms reporting bees for the United States is 86.5 lbs.; for Texas 79.5 lbs.; slightly more than the average for the South Central, 66 lbs., and South Atlantic States, 62.4 lbs., but less than the North Central, 85.8 lbs., North Atlantic, 106.9 lbs., and far below the Western States with 304.4 lbs. per farm reporting. Likewise the average value of honey produced on farms reporting bees for the United States is $9.42; for Texas, $7.80; the South Central and South Atlantic being $6.90 and $6.78; while the values are greater in the North Central, $10.07, North Atlantic, $12.50, and Western, $28.38. In the United States the honey product per colony of bees averaged 14.9 lbs.; for Texas, 12.2 lbs.; for the North Central States, 16.9 lbs.; for New York, 18 lbs.; for California, 28.3 lbs.; for Colorado, 29 lbs.; and for Arizona, 49 lbs. The average for Texas is slightly more than that for the Southern States, 11.3 lbs., but is exceeded by that of Arkansas, Kentucky, Virginia, West Virginia, and Florida. The average production of wax per colony for the United States was 43 lbs.; for Texas, 41 lbs.; for Arizona, 69 lbs.; and California, 89 lbs.

But the value of the product of the average colony is the best indication of the quality of our bees and status of bee-keeping in Texas. The average value of honey and wax produced per colony for the United States was $1.62; for Texas, $1.19; lower than the average for all the Southern States, $1.20, and exceeded by all other sections of the country as follows: North Atlantic Division, $1.94; North Central Division, $1.98; Western Division, $2.54; California, $2.56; Colorado, $2.87; and Arizona, $3.55. In other words, whereas the Texas product was valued at $468,527 in 1899, had the colonies been as productive as the average for the United States would have been worth $637,363; and had they produced as much as those in the Northern divisions it would have brought $770,972; while had they averaged as well as the Western division the value would have been more than doubled, and considerably over a million dollars.

The same point is brought out by a consideration of the average value of bees per colony. For the United States this is $2.42; for Texas but $1.91; there being only seven of the States (mostly southern) having a smaller value, while the average for all Southern States was $1.95; for the North Central, $2.95; Western, $3.10; and North Atlantic, $3.31. Thus the total value of Texas bees, $749,483, though about 50 percent greater than that of any other State, would have been increased to $973,090 had they been worth the average for the United States, and to about $1,200,000 had they been worth the average value exclusive of the Southern States. Altogether, had Texas bees been of a quality of those of the average for the United States their total value, with value of their product, would have been about $400,000 greater; and had they averaged with those of the Northern and Western States, they would have had about $750,000 greater value, and been worth approximately one and a half million dollars.

But let us consider apiculture in Texas locally by counties, and we may possibly learn something which will throw light upon the above figures. I have compiled two maps, showing the local conditions of apiculture in Texas. The first gives the number of colonies in each county, and is colored according to the number of colonies per farm in each colony. The latter is secured by dividing the number of colonies by number of farms. It is to be regretted that the census does not give the number of farms reporting bees for each county. We see that 59 counties, mostly in the Panhandle country, have no bees. Of these, 40 have a considerable poultry product. Twenty-six counties have less than 100 colonies. East of Austin there is not over an average of one colony per farm. Twenty-eight counties, scattered through the central part of the State, have 2 to 4 colonies per farm. But 7 counties have 4 to 6 colonies per farm; five—Chambers, Dimmit, Frio, Kinney, and Kimble—have 6 to 10 per farm, while Uvalde has 23, and Zavalla 35 per farm. These figures show that the number of colonies are pretty evenly distributed throughout the humid portion of the State, but that there are relatively many more per farm in central and southwest Texas.

To appreciate the conditions, however, we must consult the second map, showing the pounds of honey produced per colony and value of bees per colony in each county. The map is colored according to the honey produced per colony. These figures show that the valuation placed upon colonies is very largely a local matter, and not related to the productiveness of the colonies, with the exception of Wharton, Dimmit and Uvalde counties, where the price has clearly been raised by the introduction of improved bees. In four counties less than five pounds of honey is produced per colony. In 56 counties from 5 to 10 pounds of honey per colony is produced; and in 41 counties between 10 and 12 pounds per colony.

Thus, in over half the honey-producing counties of the State (98 out of 180) less than the average of 12.2 pounds of honey per colony is produced. In 40 counties it is but little over the average, being 12 to 15 pounds. In 26 counties 15 to 20 pounds is secured. Six counties—Rains, Brazoria, Travis, Scurry, Winkler, and Presidio—produce 20 to 25 pounds, but there are only 45 colonies in the last three counties together, so they are not to be considered. Seven counties, including Starr and Midland, which have but 12 colonies, Wharton, Menard, Live Oak, Dimmit, and Uvalde produce over 25 pounds per colony. Thus, but five counties have a production equal to the average of the Western States.

Another map should show the total honey production for each county. It would reveal that the five counties of first rank as regards honey per colony produce 6 percent of the crop of the State; that the three of the class producing 20 to 25 pounds per colony (excluding three with but 45 colonies) produce 4 percent of the total; that the 21 (excluding those with but few colonies) producing 15 to 20 pounds per colony produce 19 percent of the total; and that all together these 29 counties, having an average production per colony greater than that for the United States, produce 29 percent of the total production of the State.

Of those counties producing 12 to 15 pounds per colony, over the average for the State, 35 (excluding five having less than 100 colonies) produce 27 percent of the crop of the State. Thus, the 64 counties, or 33 percent of the honey-producing counties of the State, produce 54 percent of the total crop. The remaining produce the other 46 percent. This points to the conclusion that the bulk of Texas honey comes from counties east of Austin, which produce about the same amount as the average per colony for the State, 12.2 pounds.

It is to be regretted that the value of honey for each county is not given, and that the value of honey and beeswax is combined in the total for the State, as these figures would give us a better indication of the quality of the product of different sections of the State. I am aware that the census was subject to much error, and that it is now three years old. But in comparing it with figures secured from bee-keepers in different counties, we are inclined to believe that the census is fairly accurate as a whole, and more to be relied upon than private information. Though a large advance has been made in apiculture in Texas in the last three years, and some shifting in the areas of greatest production, still the general conditions are doubtless practically the same. Those of you who are familiar with local conditions can doubtless better and further interpret the above statistics than can I, but one or two conclusions seem to me quite readily apparent:

(1) The bulk of the bees and honey of Texas is of a low grade.

(2) The honey is produced mostly east of the Colorado River.

(3) In this area there might easily be supported five to ten times the present number of colonies.

(4) By improvement of the bees, and by better methods of hiving and management, the average product per colony might readily be increased 50 percent.

It seems to me that these facts open up a large field for our apiculturist to do valuable missionary work in bettering apiculture in Texas. It seems to me that many a farm might support a number of colonies of bees, cared for largely by the women and children, which, like the poultry, would go far toward furnishing the comforts of home and happier living. In connection with the development of large fruit interests, there is also a chance for many moderate-sized apiaries, for fruit-men are coming to learn that they must have bees to produce many varieties of fruit in perfection. Nor does it seem to me that professional bee-keepers need have any apprehension of an increase in the number of colonies, and consequent product will have an undesirable effect upon the market for first-class honey.

The market for honey is practically undeveloped, and the supply is far from filling the demand. As long as the market is not glutted an increase in production, providing the quality is maintained, exercises but little influence on the price of the first-class product. It seems to me that by bettering the methods of bee-keeping throughout the State, this Association will be doing much toward securing better prices for the products of its members. Unfamiliar with the conditions of apiculture in the widely varying conditions of this great State, it is impossible for me to point out the local application of these statistics, but their significance will be readily appreciated by this audience, and as time goes on we trust that Mr. Scholl will further elaborate this preliminary survey of Texas apiculture. We trust that with your co-operation and support we may do much toward bettering and furthering this most interesting and profitable industry.

In closing, let me again welcome you here. Visit the bee house and yard. Mr. Scholl will be glad to explain all details to your satisfaction, and we will appreciate all suggestions or criticisms. Let me assure you that though not a practical bee-keeper by profession or training, it will be my constant endeavor to direct the apicultural work under our care to the best interests of the advancement of Texas apiculture. I trust that in a few years Texas may lead in the quality of her bees and their product as well as in the quantity, and that her experimental apiary and the organization of her bee-keepers may be the best possible. To these ends we shall devote our best efforts, and with the continued assistance and support of this Association we do not doubt their achievement. E. DWIGHT SANDERSON.

A unanimous vote of thanks and appreciation was extended to Prof. Sanderson for the interest he has taken in the pursuit of apiculture in Texas.

Some figures of Mr. Toepperwein were very interesting, as they showed to some extent the great amount of honey that was produced in Texas. He reported that 13,000 cases of cans, of 120 pounds each, had been already sold, besides 190,000 sections. Of honey already shipped he says there was 1,560,000 pounds, both comb and extracted. The Hyde Bee Co. report about twice that much more.

(Continued next week.)

Honey as a Health-Food is the name of a 16-page leaflet (3½x6 inches) which is designed to help increase the demand and sale of honey. The first part is devoted to a consideration of "Honey as Food," written by Dr. C. C. Miller. The last part contains "Honey-Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by every one who has honey for sale. It is almost certain to make good customers for honey. We know, for we are using it ourselves.

PRICES, prepaid—Sample copy free; 10 for 20 cts.; 25 for 40 cts.; 50 for 70 cts.; 100 for $1.25; 250 for $2.25; 500 for $4.00; 1000 for $7.50. Your business card printed free at the bottom of the front page, on all orders for 100 or more copies. Send all orders to the Bee Journal office.

Contributed Articles

Bees Feeding Each Other—Apiarian Errors.

BY ARTHUR C. MILLER.

SO, Mr. Editor, you think Mr. Miller is guessing when he says that bees never offer food to the queens or to each other on or by the tongue.

Suppose I answer you Yankee fashion by asking if you, or any one of your acquaintance, ever saw food so given and can swear that it was so given. Don't answer hurriedly, but before you answer at all, let me ask you to go and look at the bees. Take a frame from the hive, hold it up before you, and when you see one bee getting food from another, just tip the comb over until you can look at the bees from the side—see them in profile—take a magnifying glass if you wish. You will find one bee has its tongue in the other's mouth, and that the tongue of the latter is folded back under her chin. Now, if the bee with the projected tongue is the giver, why is the other not taking it on her tongue as she should be to fulfill present theories, for you say the queen puts out her tongue to receive food? But if the bee is taking food, why is not the giver's tongue out giving it, if that is the way food is given?

Now, just consider the structure of a bee's tongue; is there anything about it to suggest the possibility of food passing from one tongue to another? Does it look possible or probable? Did you every hear of any one seeing two bees holding the tips ("spoons") of their tongues together, or of one bee holding the "spoon" against the grooved face of the others's tongue, or of the grooves of two tongues being held together? Did you ever consider why several drones put out their tongues toward a brother drone when that brother is getting food? Offering him food, aren't they?

The bee-keepers may go on believing food is given on and by the tongue, and a whole lot of other errors if they choose, and I cannot stop them, and if it makes them happy far be it from me to take away their pleasure. But they must not expect others to take much stock in what they say on other matters relating to bee-life, when they are so blind to what any one may see if they will take the pains to look.

I don't ask any one to take my word for the manner in which bees get food, or take my word for other things about bee-life. I only describe them as I see them, and any one can go and see the same things in any colony.

Beedom is full of hoary-headed, fossilized errors which should either be buried or put into glass cases as curiosities, but it is high time they got out of the bee-press, and gave the room over to more progressive matter. I take a host of bee-papers, and month after month wade through a sea of rehashed topics that would have been settled long ago had the truth been allowed to prevail. Matters of practice in practical apiculture hinge on a knowledge of bee-life, and where this knowledge is lacking—or worse, where error is held in its stead—practice is pretty sure to be at fault.

It's theories, not conditions, which have been our guide; now let's reverse things and go ahead. Running around in a circle is nice fun for little children, but rather undignified and certainly unprofitable for older persons.

Providence Co., R. I.

[See editorial reply on page 532.—EDITOR.]

Bee-Paralysis—Sulphur Cure a Success.

BY O. O. POPPLETON.

I PROMISED some time ago that as soon as I knew the result of certain experiments not then finished, I would write out some of my experiences with bee-paralysis in my apiary.

The disease is more widespread and serious than most bee-keepers realize. Twice within the last 20 years it has lessened the season's receipts from my apiary over 25 percent, entailing a loss of about 15,000 pounds of honey and quite a number of colonies of bees. There is more or less of it every year.

The disease itself is exceedingly erratic—comes and goes without any apparent cause, and without strictly following any rules. Colonies in perfect health will sometimes be attacked suddenly, and in a very short time be reduced to a nucleus. At other times a diseased colony will suddenly recover without any known cause. For this reason no rule can be made by experiments with any one or even a few colonies. And now, after a personal experience with over 200 diseased colonies, I more than ever realize how little we really know of the nature, causes, prevention, or of the disease. While I am satisfied that it is to a limited extent contagious, I do not know exactly how the contagion is communicated.

While in Washington, just after the Philadelphia convention, Mr. Benton introduced me to Dr. Howard, United States Entomologist, and I had a short talk with him about his Division making a scientific investigation of the disease. He asked me to call on him in his office and talk the matter over; but when I did so he was out. I was disappointed, as I hoped, through him, to get some real, definite knowledge of the disease and how to fight it. I still hope that some practical scientist will do this work for us.

I have not yet learned how the contagion, if any, is communicated, but I think through dead or diseased bees only. Last season I made some experiments to learn whether combs, honey or brood carried it, by taking away all the brood from what diseased colonies I had and giving them to certain nuclei. I built up six nuclei by giving them brood from diseased colonies, and so far (nearly a year afterwards) only one of these six colonies has shown any signs of the disease.

As several other colonies have taken the disease this spring, it is not very likely that this one took it because of these combs of brood and honey. That five out of six failed to take the disease after nearly a year has passed looks as if it will be safe to use all combs of either honey or brood. This simplifies the problem of what to do with diseased colonies, and save the loss of combs and brood, as in the cases of foul brood.

Several years ago nearly or quite one-third of my apiary was diseased, and the prospect was that I might have to abandon bee-keeping because of it, after nearly half of the diseased colonies had died. Experimenting with all the methods of cure I could hear of, and the use of sulphur proved the only method of any value. This I applied to three or four colonies at a time, then in a few days to a few more. Then, after an interval to more, and so on, until all had been treated. The result was the entire cure of each colony treated in the order of their treatment, while not a colony in the yard recovered until a certain time after treatment, showing conclusively that it was the treatment which affected the cure. I have used the same method more or less since then, but not to so great an extent. Out of some 40 or 50 altogether which I have treated, all were cured by one treatment except three, which required a second one each. As many have reported failures in treating diseased colonies with sulphur, it looks as if they must have misapplied the sulphur some way, and I think it will be best to give in detail the way I have used it.

For reasons I will give later on in this, I always go to the colony I am to treat during the day, and take away all the combs that contain brood; or, at least, unsealed brood or eggs, and give to some other colony; then in the evening, as soon as the bees have quit work and are all home, I proceed to dust sulphur over every comb in the hive and, if possible, on every bee in the hive. I never measure the exact amount of sulphur used, but suppose about a teaspoonful to every three or four combs in the hive.

I do the work by taking what sulphur I can hold between my thumb and first two fingers and dusting same over first one side and then the other of each comb, bees and all; also over any collection of bees there may be off the combs in any part of the hive. My aim is to have a thin dusting of the sulphur over every bee and every comb in the hive. The thinner the dusting the better, so it reaches everything in the hive. I tried using an insect powder gun, but couldn't do as good work as I could with my fingers. The next day, after doing this dusting, I carry back to the hives the same number of combs and brood as I had taken away.

The reason for taking away brood before dusting the combs, and returning again afterward, is because the dusting of combs not only kills all the unsealed brood in the combs, but ruins these same combs for brood-rearing. If such combs are left in the hive, all eggs deposited in them will hatch out all right, but the larvæ will die as soon as hatched. By giving these same combs to strong colonies, they will clean them out and use them all right, and no loss of combs or brood will result.

For a week after dusting a diseased colony with sulphur, fully as many or more bees will be dying as before the dusting; and this fact may lead some to think the "cure" is not a cure. It will take a couple of weeks before one can tell whether the treated colony is cured or not.

Diseased colonies are usually very weak in numbers after being cured, and are of very little, if any more, value than a good nucleus. I have doubts whether it really pays to cure them except such as can be treated very early in the season, before nuclei can be profitably made. For the last year I have adopted the plan of curing such colonies as needed it as early as the middle of February, or even earlier; after that I make as many nuclei as is needed for the purpose, and as soon as they have a young laying queen I take away the combs from the diseased colonies, giving the brood to these nuclei, thus building them up into good colonies and destroy all the diseased bees with sulphur fumes.

In changing combs from diseased to other colonies I am very particular to know that each comb is absolutely free from bees, especially of dead ones that may be in some empty cells. Diseased bees quite often crawl into empty cells to die.—American Bee-Keeper. Dade Co., Fla.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Some Feminine "Four O'clocks."

On page 296, Mrs. West says she gets up at 4 o'clock in the morning.

Well, Mrs. West, we are getting up at 4 o'clock in the morning, too. I still think it entirely too early, but those bees of ours are such hustlers that we have to do it in order to keep up with them. I hope Texas is fulfilling your expectations, and giving you as nice a crop of honey as the bees of Illinois are giving us.

Lost Faith in Bee-Stings for Rheumatism.

I have lost faith in bee-stings as a cure for rheumatism. I never had as many stings in my life as I have had this summer, and I am having my first experience with rheumatism. It is all in my fingers, and is not a pleasant experience by any means, but I am never going to recommend bee-stings as a cure.

How to Prevent Swarming.

I have been wanting to say a word to our bee-keeping sisters, but have been so busy, or, rather, I want a little information about bees. I take the Bee Journal, but I can not find just what I want.

We have been in the bee-business only two years, so we know very little about it. We have 65 colonies, and want to work for comb honey, but our bees don't seem inclined to do so, but want to swarm all the time. How can we prevent it? They have all swarmed once, and the most of them have swarmed the second time, and still some are casting off little swarms every week or ten days. Can we put them back in the parent hive? If so, shall we kill the queen? I put some swarms back with the queen, but they came out again the next day. We do not want to enlarge our apiary, so what I want to know is how to prevent swarming. Plenty of room does not seem to do our bees any good, as I put plenty of supers on.

My husband and I care for our bees, and we find it very pleasant as well as interesting. Mrs. Lou O. King.

Garfield Co., Colo.

This has certainly been an unusual year in this locality for swarming. Bees have seemed to have a mania for it. So many absconding swarms are going into chimneys, porches, and siding of houses all over the country. I know one man that has had five swarms come into his house. Every few days some one telephones that they have had a swarm of bees come to them, and would like to know what to do with them.

It is not an easy thing to prevent all swarming at best, and this year it has been much more difficult than usual. It is an exceeding difficult thing to prevent prime swarms, but these after-swarms that are so annoying can be almost certainly prevented. The old queen comes off with the first swarm, and she is not so flighty and hard to manage as a virgin—not so likely to abscond.

All after-swarms will have virgin queens. When your first swarm issues hive it and set on the stand of the old colony. Set the old colony close up to the swarm, letting it stay there about seven days then remove it to a new place. The flying force, when they go to the fields, instead of returning to the hive from which they came, will go back to the old place, and join the swarm, and the old colony weakened by losing all its flying force, and having no honey coming in, will conclude it doesn't want to swarm, and you will have no further trouble with it.

Your plan of returning swarms was all right, but you will have to keep on returning them until the last queen emerges from the cell. You see, it is this way:

When an after-swarm issues, one or more queens that have been kept in the cells are allowed to emerge, and when the swarm is returned a battle royal takes place among the free queens, only one surviving. If all have been allowed to emerge from the cells, the one return of the swarm will be the end of it; but if any are left in the cells you have to return the swarm again, perhaps the next day. So you will have to keep on returning the swarm as often as it issues, which may be only once, or it may be several times.

You *can* prevent all increase by returning the first swarm, and all succeeding swarms, but it may make a good deal of work.

A Beginning Sister—Honey for Stings.

I might say I am a beginner in the business. I started last year with one colony, and July 20 our first swarm issued, and as we had a clipped queen it was simply fun handling them, but when our second swarm came it was not so pleasant. We hived them, and after two days they left the hive and never waited to cluster, but went up over the tree-tops and out of sight, and we saw them no more. Our third swarm went back to the parent colony, so we had but two to winter, and they came out fairly well; only our clipped-queen colony is very weak, but it seems to be very industrious at present. We have not examined them yet, as the weather is too cool, and it might chill the brood, if there should be any, but I fear she has been hurt in the caging last summer, as the colony has simply dwindled ever since.

I am very fond of the bees, but I find they don't make very good pets; but I hope they will be more gentle this summer. They seem so busy now they have not time to sting.

I think the Bee-Keeping Sisters department of the Bee Journal the best corner in it, and that is the first I read when I get the paper. I would like to see many more letters every week.

Do any of the sisters ever get stings? If so, try honey on them. That is my cure. Mrs. Peter Cameron.

Polk Co., Minn.

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

THE DEBT OF ALL TO ALL.

He'll never see a word of it, but others may who are in danger of feeling like him a few years hence—that man who stops his bee-paper because he doesn't get the wrappers off it. I know right well the disagreeable feeling of having baskets full of unopened papers around; and so I am qualified to scold him considerately. I scold. Is it right to take a course which, if generally followed, would deprive us of bee-papers? His duty to the American Bee Journal may not forbid, but how about his duty to the rest of us? I'm presuming that he's a good man all through, and wishing to meet all his just obligations. It is not only the journal that needs him; *we* need him. And we think that if he would hold on a bit there would come sooner or later a revival of interest ("Left thy first love"), and that that revival of interest would do him good, both personally and financially. Papers that I suspect of having something in on one of those topics in which I am intensely interested—they get their wrappers torn off "quick sticks." Probably so with him.

Somebody in the past has made apiculture into a vocation this man and others could make money at; and the bee-paper has had a notable share in the work. Shall it be killed off, therefore? Somebody *will make* the apiculture of the future different—better than it would be if left to itself; and the bee-paper will have a strong hand in that. Give it, then, its very moderate measure of support. Page 403.

IMPORTANCE OF VENTILATION.

In case the reasoning of Arthur C. Miller proves to be rock-ribbed all around, and the air of the hive needs to be renewed 2,400 times for each 1½ pounds of honey eaten, it calls us (like the cardinals shut up at Rome) to a little personal interest in ventilation. Note how he tells us that this is a complete change every 30 minutes. Well, air is a nimble fluid, and will do a good deal of traveling in 30 minutes if we give it half a chance. But perhaps we must give it that half chance a little better than we have been doing in the past. One element of the situation most of us do not have in mind is how much air in 30 minutes can be made to go right through a board, a block of ice, a brick, a stone, almost anything. I have seen statistics on this point that were surprising. Wish I had them boiled down and in my memory so I could give them. Page 408.

AN ERROR THAT PRODUCED A HASTY LAUGH.

A crooked mark prominently out of place on page 409 made me laugh. Eyes a little dim, I didn't notice the hyphen which gives the whole thing away, and read—

"Does the Bee Work Herself?"

—and this in the Sisters department, too. Hires an ant, perchance, or induces an aunt. Looks so supremely wretched over the task she is dawdling at that her "brothers" do most of it eventually, just to relieve their minds. Page 409.

SEVERAL HUNDRED POUNDS OF HONEY.

In my department, page 410, in place of "several pounds of honey" read, several *hundred* pounds of honey. Kind o' hope the readers actually got the meaning by crediting me with an uncontemplated dry joke.

PREVENTION OF DRONE-COMB BUILDING.

Is it true that very deep entrances and much space below the frames prevent the building of drone-comb? According to the reasoning of R. J. Cory, page 413, it ought to be. May be suspected that a rousing colony, filling all the bottom and part of out-doors, will forget that the bottom is an exposed situation. But that would not usually be in a newly-hived swarm, however; and that's the case when we are most often and most earnestly desirous of having all worker-comb built. Need a collection of experiences on this point, I think. As queenless bees always build drone-comb it may be suspected that *distance* from the queen has something to do with it even when there is one.

FOUND IRON IN HONEY.

And so the German savants have found iron to be a constituent of honey. Some of us knew pretty well all along that there were more things in honey than our professors would tell us of. Same proportion of iron as in good bread. Makes good blood and strong men. Page 414.

BALLED QUEENS DIE FROM VARIOUS CAUSES.

We at once suspect that the suffocation theory would hardly suffice alone for the death of balled queens when we think what a lot of drowning all bees will endure. Pretty plainly she *may* starve if they keep at it long enough—and don't get violent enough to kill her some other way—and friendly bees don't feed her while hostile ones are mildly hanging on to her. There seems to be all grades of violence, from a mere gentle hug to the most spiteful, hissing, tearing rage—not only killing the queen, but a great lot of the bees also. Mental worry is an ample cause of death in so highly organized a creature as a queen. In fact, I believe a worker can be worried to death—or made to worry itself to death, in about an hour. Angry bees sometimes eject poison, as our own sense of smell quickly tells us, and absorption of ejected poison at least don't do her any particular good. Better we say a balled queen dies from a variety of causes—not usually a sting, but sometimes. Page 414.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Italianizing in Louisiana.

1. When is the best time to Italianize bees in Louisiana?

2. How many queens would it take for 80 colonies to be Italianized by the next honey season?

3. Is there anything more modern upon the subject of rearing queens and Italianizing than the principles laid down in your text-book? If so, what is it?

LOUISIANA.

ANSWERS.—1. If you have no mishaps in introducing it does not make so very much difference when it is done. There is less danger of failure in introducing right in the harvest-time, but less interference with storing by introducing later in the season.

2. Possibly 85 or 90 to make a sure thing of it, if you have some losses in introducing. But you probably contemplate rearing queens, and in that case a single queen to rear from would do as well as more. Whether you can make a success of it in that way depends somewhat upon your season. With a good fall flow and vigorous action it ought not to be a very hard thing. Even if you have no fall flow, feeding will to some extent take its place.

3. There is perhaps nothing later than what you may find in "Forty Years Among the Bees," at least it is the latest of my knowledge and practice, yet that is limited only to my own practice. The excellent work of G. M. Doolittle on queen-rearing goes into the whole subject most fully. Nothing better can be found in print.

Honey Extracted When Two-Thirds Capped.

Owing to the lack of supplies I extracted some honey when about two-thirds capped. Will it do to sell it that way?

ILLINOIS.

ANSWER.—If the honey is very thin, it is better to sell it in that condition, but the mere fact that a third of it is still uncapped does not condemn it. If it is good, thick honey it does not matter that it was partly unsealed. If thin, it may be brought to a better consistency by letting it stand uncovered where it will be heated to 100 degrees or 125 degrees.

Bee-Keeping in Arkansas.

On page 473, "Pennsylvania" says he had a colony that had cells started in 5 days. I had a colony that cast a swarm in 14 days after being hived, and left the parent hive in good condition.

1. I have a small apiary that I run in connection with a farm. I live about 1¼ miles from the Little Missouri river. Do you think the distance cuts much figure with the crop?

2. I have 28 colonies and 6 nuclei. Holly, linn, rattan, and various other plants and vines grow around that secrete nectar. Do you think it would pay better to increase the bees and put them near the bottom-land, or run a small yard with the farm out here in the hills? We have black-gum, rattan, blackberry, prickly ash, cotton, and sumac, all of them producing lots of honey. Do you think it would pay to neglect an ordinary farm to move the bees nearer to the bottom?

ARKANSAS.

ANSWERS.—1. Yes, distance cuts quite an important figure in many cases. But it is likely that a distance of 1¼ miles is so little for the bees that there would be little gain in moving nearer.

2. I don't know, but I think it well to stick to the farm, at least until the bee-business grew sufficiently to afford a good living. You might not find 100 colonies succeed so well as 28, and you might not find as much advantage as you expect from changing your location.

Moving Bees in a Car—Yellow Sweet Clover Honey.

1. Would it be safe to move bees in a closed car with household goods, they to be covered with wire-netting only? The car would be a week on the road.

2. Is honey from yellow sweet clover darker in color than that from white sweet clover?

ONTARIO.

ANSWERS.—1. Something would depend on the weather. If not very hot, and the whole top of the hive is covered with wire-netting, and the bees are supplied with water by sponge or otherwise, they ought to get through all right.

2. I don't know, but I think the color is the same.

Untested Queen Questions—Bees Gnawing Foundation.

I have been trying to follow modern methods since last spring, and have this season been fairly successful. But the more I learn about bees the less I seem to understand about them, therefore I will venture to ask the following questions:

1. Are the "Standard Bred Queens" sent out by Editor York as premiums pure Italian?

2. Are they fertilized or virgin?

3. Is there any danger of getting foul brood with them as a free gift?

4. How soon should I be able to find eggs laid by one of those queens? I got one and introduced her Aug. 1, and found her all right this morning, Aug. 4.

5. Why do my bees gnaw some of the foundation out of the frames (both starters as well as full frame) and then build up again, but too much drone-comb?

MISSOURI.

ANSWERS.—1. [Yes.—EDITOR.]

2. They are fertilized and already laying.

3. [No.—EDITOR.]

4. Sometimes within 24 hours after she is out of her cage, sometimes not for a week. The same is true of any queen introduced, even if she has not been through the mail.

5. I don't know. Possibly pure mischief when no honey is coming in.

Late Introduction of Queens—Swarms Returning.

The honey-flow has been over here a long time, since about May 15.

1. Can I make any forced swarms at this time, or must I wait until spring?

2. Can I introduce new queens yet? and how will I have to proceed?

3. I have one colony of bees which swarmed about 6 or 7 times, and the swarm went back to the old hive every time immediately after hiving in a new hive on starters. I also gave new comb for brood, and did every other way I could think of. What was the matter with it?

LOUISIANA.

ANSWERS.—1. You can, but not so successfully as when there is a flow of honey. You will have to feed, and it will be necessary to keep a very sharp lookout or you will start a bad case of robbing.

2. Yes, you can introduce queens any time so long as the weather is warm. The proceeding is the same as at any other time, but introducing is not always so successful in a dearth as when honey is coming in freely.

3. The queen may have had defective wings so that she could not go with the swarm; then when the bees found there was no queen with them they would return to the old hive.

Foundation Starters or Full Sheets—Gathering from Corn-Tassels—Too Strong Colonies—Rearing Queens

1. In using foundation starters, if you cannot use full sheets would you use wide or narrow starters?

2. What do bees gather from corn-tassels? I see them working on them.

3. Can a colony of bees get too strong? By this, I mean can they be strengthened up to such an extent that they

will fail to store as much honey as a less populous colony, because the bees will consume more honey than the weaker colony.

4. Would a colony with bees and brood in three 8-frame dovetailed hives be too strong in your opinion?

5. In starting queen-cells, by fastening a strip of comb (with the cells scraped off of one side) to a frame, so the cells point downward, my trouble is to get the strip of cells fastened without spoiling the eggs. Have you reared any queens by this method? If so, how do you fasten them? If you do not rear them this way, what is the best way to start them? I do not have a great deal of time to spend with queens, anyway. MICHIGAN.

ANSWERS.—1. Wide; as a rule the larger the starter the better.

2. Pollen, and perhaps honey, too.

3. Other things being equal, I think no matter how strong a colony might be it would always store more than a less populous colony. I do not believe that a colony which is all the progeny of one queen can ever become too strong for the best results. If several colonies were united into one giant colony, it would store more than any weaker colony, but it might store less than the same bees would have done if not united.

4. No, it would not be too strong, but as mentioned in 3, it may be that the same bees would have stored more as two separate colonies—for I take it that you mean to unite two or three colonies to get the three stories filled. If a single queen would fill the three stories, I would say all right.

5. Yes, I have reared a good many queens by the Alley plan, and have found no difficulty in fastening the strip by dipping it in melted wax, and the eggs were not injured by it. The way I prefer to rear queens for my own use is given very fully in "Forty Years Among the Bees," and although it would take too much space to give it here, I may say in brief that my best queen is kept in a nucleus where fresh combs are constantly built and filled with brood and eggs, and when these tender combs partly filling the frames are given to queenless bees they suit them to a nicety for starting a lot of fine cells.

You say you haven't much time to spend with queens. Pardon me for saying that if you have time to spend with bees at all, you have time to spend a good share of it in rearing the very best queens, seeing that a queen is the the very soul of the whole colony. Good queen, good colony; poor queen, poor colony.

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FROM MANY FIELDS

Two Brothers Go "A-Beeing."

I don't know whether letters are relished from tenderfeet or not. My brother, C. W., and myself, with our families, dogs, cats, parrots, and everything, moved to this beautiful spot from smoky Chicago last spring. We decided to take up bees as a side-line. I didn't know a queen-bee from a lightning-bug, and all my brother knew he had gleaned from a few random visits to a mutual friend, Stoughton Cooley. However, what he saw there got him interested, and we purchased five nuclei from a dealer.

Say, it would have made an old bee-man crack his ribs, I suspect, to have watched us manipulate bees! Later we picked up a snap in the shape of a couple of colonies from a "widder" up in the country, whose son had died, or done something, I have forgotten what. Shortly afterward, Mr. Stoughton Cooley being out, he informed us that, in his judgment, both of our snap colonies had foul brood. Of course, our hair rose straight up, and we at once notified State Inspector Smith. While waiting for him we destroyed both colonies, but boxed up the comb for his inspection. He came last evening, and inspected us all over to-day.

Mr. Cooley was right; it was foul brood, but fortunately they had not infected the rest of the colonies, of which we now have 11. Mr. Smith gave us a clean bill of health, said there was not the slightest trace of foul brood, which information was thankfully received. Mr. Smith is a pleasant gentleman to meet, and is evidently "on to his job" with a big J. He submitted to being pumped gracefully, and gave us quite a batch of information on bee-lore.

In our study of bees so far we are undecided where to place them. Sometimes we think they should be classed with Mark Twain's ant in the Black Forest of Germany. Don't seem as if they knew enough to come in out of the wet. Then, again, it looks as if they were pretty level-headed. We will give you the ultimate verdict later on.

Inspector Smith informed us that he had 42 calls booked now from all over the State.

FRANK E. KELLOGG.

McHenry Co., Ill., Aug. 7.

An Interesting Experience.

In 1901, I had 10 colonies of bees in old boxes, nail-kegs, etc., and I gave a bee-man half of the bees and honey to put my half in old Langstroth hives. That season we got more honey and money for our bees than we had in 10 years before.

In 1902, we had (I say *we*, because I am teaching my wife and children the bee-business, as I think it better to leave them that than an insurance policy, although I have one) 7 strong and 2 weak colonies. In June I bought 25 colonies that were 25 miles from home. There was plenty of black sage there so I left them, but they have done but little good, and I could not give them the care they needed, and I am afraid they have foul brood. We have no one here who knows what foul

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brood is, but from what I can read and see I am afraid it is. I am going to treat soon with formaldehyde.

I now have 45 colonies. This has been a very poor year here, and a fruit-man near my out-apiary puts out poison—he says for the yellow jackets, but of course my bees get it, too, and I don't think there is any recourse but to move the bees. And this same man, who puts out poison, had 50 colonies of bees a year ago that he had bought. To hear him talk, he was a bee-man of the "first water." He commenced to tell me what to do, and what not to do, and finally I asked him what bee-paper he took, and he said, "None." I asked him what text-book he used; he said, "None." I asked him how he could get along, and he said, "Common sense. These fellows who write books and papers don't know any more about bees than I do."

Now listen, friends, and see what his success was. In July of that year he was trying to sell his bees, because he claimed they damaged his apricots in drying, and he would not be bothered with them. Well, he sold, and I understand that a third of them had foul brood in a short time afterward.

Now, my 25 colonies are in range of a man who has 80 acres of apricots, and he says his apricots have been better since my bees have been there (4 years) than ever before. And I asked him if they injured his drying apricots, and he said, "No, they do them good by taking out the water so they will dry sooner." So that is the result of a bee-man without a book on bees or a bee-paper, and so it will ever be.

When I started in I got "A B C in Bee-Culture," Gleanings, and last, but not least the great American Bee Journal. Now I am sent for here and there to take off honey, transfer bees, and give information. They say, "Go and see Wittner, he knows more about bees than any one I know of." (They don't know how little I do know, and I don't tell them, either). But such is the reputation of a man who tries to inform himself from what it has taken others years to learn. What could I do without my bee-literature? Why, what I did before I had it—*nothing* in the honey-business.

So, in closing, I say hurrah and three cheers for our bee-book, G. W. York, of the American Bee Journal, Gleanings, and Root, hog or die. C. H. WITTNER.

Santa Cauz Co., Calif.

P. S.—And add hurrah for the Chicago Queen.

Italians and Unfinished Sections.

I have been a constant and interested reader of the American Bee Journal for about 3 years, and will say that it's worth to *me* has been many times its cost. I am always interested in items "From Many Fields," as I belong to the same class of little fish that swim in that shallow pool.

I keep Italian bees, both 3 and 5 bands. I bought 3 colonies of blacks to test their great value in the production of fancy comb honey. After a test of two seasons in the same yard, and giving blacks advantages in the way of special care, also full sheets of foundation in sections, I was disappointed, or rather pleased, to find that my Italians could and did beat them both in number of sections and fancy capping. I tested them with $4\frac{1}{4}$x$4\frac{1}{4}$x$1\frac{7}{8}$ and Ideal sections—and it was with surprise that I read the article of Mr. Hutchinson, on pages 492 and 493, which is so at variance with my experience. Formerly I was bothered with greasy capping with my Italians, but by removing all finished sections as soon as the bees had completed them, I have failed to have a single *greasy section* from 50 colonies.

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I have tried to breed from my best cappers, but hardly think that I overrated it in that way. Try removing finished sections within 5 days and see if greasy sections don't disappear—if you fail, I'll "holler" "*Locality!*" and then advertise in the American Bee Journal the best strain of bees in America. Sure thing, Mr. Alley will not be in it, and Mr. Doolittle will do less. For fear I will be *swamped with orders*, I will say that I have no queens for sale, but might sell Yon Yonson a queen over the 'phone.

I sold the black-bee sections 6 for $1.00, and sold the Italian Ideal sections, weighing 14 to 15 ounces, 6 for $1.10, giving the buyer choice of 16 to 18 ounces of bee-way section, or a light-weight plain. I sold to *consumers*.

I have tried hybrids, but none are equal to the pure Italians in this "locality."

During the height of the honey-flow I run out of foundation, and could not get it in time, so I was in quite a disagreeable condition. Luckily, I had quite a number of sections with comb in them, left over from last season. I cut the comb out of the sections, excepting a V-shaped piece which I left as a starter in the section. I then cut the comb taken out into 3-cornered pieces, about 2 inches to a side, with a hot bread-knife, which did the work in first-class condition. I then took the sections in the flat and laid them on the table; I held the pieces of comb for just a moment over a lighted lamp, and then placed them in the center of the section, the melted wax making them adhere tightly to the sections. I could not see but what I got as good results as though I had used foundation. So you see my unfinished sections were worth 65 cents a pound. I am so well pleased that I shall try it again. J. M. WEST.

Pike Co., Ohio, Aug. 1.

Poor Crops in Louisiana.

The honey crop in Louisiana is very poor this year, about 50 percent short, caused by the excessive rains which began in May. This, as a rule, is a great honey country, and we never have to take the bees in-doors to winter.

As I am intimate with Illinois and the other 8-months-winter States, I can proudly say Louisiana and California have them "skinned a Texas black." S. J. WEBER.

East Baton Rouge Co., La., Aug. 4.

Wanted—A Honey-Wagon.

I need a honey-wagon badly, and I know there are many thousands like me; in fact, everybody who handles honey needs a light, cheap honey-wagon that will hold 150 pounds of comb honey. It should have springs so the comb honey could be hauled over ordinary ground without breaking. We could haul the heavy combs to the extractor, and return them; we could haul comb honey to the honey-house, and many other things about the apiary. If I had one I would use it apart of the time in selling honey.

Now, don't say, "Use a wheelbarrow." It

breaks the honey, is hard to push, and sometimes it upsets.

I have kept bees for 30 years; I have never made millions out of them, but they have more than paid their way. We have a little more than half a crop this year, and the quality is very fine.

Let us hear from others—any person who wants a honey-wagon. We can generally get anything we want, if we talk right through the American Bee Journal. Oh, may it live while man remains on the earth.

D. G. PARKER.

Brown Co., Kans., Aug. 11.

[Here is a chance for bee-supply manufacturers. Bring on your honey-wagon!—EDITOR.]

Appreciative—Drowning Queens.

On page 483, appears a description of a robber-cloth by Dr. Miller, which, I think, is a very useful article, and for which I wish to return thanks. In fact, there are very many things I have seen in the American Bee Journal for which I intended to thank the writers many times. Hardly a day passes that I do not feel thankful to some one who has contributed to my knowledge in bee-keeping, and I think it would be a good thing for all of us to indorse a good thing when we receive it, thereby encouraging a more free contribution, as well as letting the writer know that his efforts are appreciated.

Right here I wish to thank Dr. Miller especially, for his method of arranging the brood-chamber, as regards the pollen-comb described by him in his "A Year Among the Bees" (now out of print). This seemingly little advise is of no small consequence to me, nor to any one whose locality furnishes an over-abundance of pollen, as it puts one in position to put his hand right on the bulk of pollen in a colony instantly.

Another seemingly small matter of no less importance, is the adjusting of the brood-nest in the spring with a division-board, *a la* Doolittle. Please accept my thanks, Mr. Doolittle. This adjusting is of great value to me in this cold climate, for with it I can fit up any size colony snugly, and not have them put brood in undesirable combs.

Another very important thing to me is to know how to use the most important hive-tool—a very strong jack-knife, *a la* Heddon. I have used many different hive-tools, such as a putty-knife, framing chisel, a screw-driver, etc., but to my notion there is nothing that can approach a "jack-knife" of the right kind for convenience and handiness. It is always ready for service, such as a chisel, screw-driver, crow-bar, queen-clipping device, drone-brood extinguisher, hive-scraper, tack-hammer, etc.

In this way I could go on mentioning implements, methods, and the names of their inventors and contributors, but space does not permit, as it would fill the columns of the American Bee Journal for weeks, so I will refrain from going into detail any further, but thank each and all who have been contributors to these columns, for even the smallest mite will help to make up a complete method.

Before I close I want to haul Dr. Miller over the coals for his putting those queens into the water. (See page 483.) He says he wets them so they may introduce easier, but when you read on you find he drowns them. Now, you just wait, Doctor, I am going to call the attention of Miss Wilson to you, and if you put any more queens into water to wet them, she'll tend to you, won't you, Miss Wilson? For he will say he just wets them, but afterward you see he drowns them. So don't let him put any more queens into water, for he will surely drown them. He thinks he can introduce them easier then. May be he can, but would they be worth any more than those half-dead ones we get through the mail? Well, we will wait and see what Hasty says. Most likely he is after him by this time, and the chances are he caught him.

Chippewa Co., Wis. A. C. F. BARTZ.

So. Dakota Prospects—Foul Brood.

As it has been some time since I have seen anything in the American Bee Journal in regard to the honey prospects of South Dakota, I thought I would write what they are.

Our bees wintered well, all those with plenty of stores. I winter them on the summer stands, and never lose a colony on account of the weather. If I lose any it is on account of the queens. This is the 15th year I have kept bees in this place, and I produce comb honey altogether, also allow natural swarming and

QUEENS!

Golden and Leather-Colored Italian, warranted to give satisfaction—those are the kind reared by QUIRIN-THE-QUEEN-BREEDER. Our business was established in 1888. Our stock originated from the best and highest-priced long-tongued red clover breeders in the U. S. We rear as many, and perhaps more, queens than any other breeder in the North. Price of queens after July 1st: Large Select, 75c each; six for $4; Tested Stock, $1 each; six for $5; Selected Tested, $1.50 each; Breeders, $3 each. Two-frame Nuclei (no queen) $2 each. All Queens are warranted pure.

Special low price on queens in lots of 25 to 100.

All queens are mailed promptly, as we keep 300 to 500 on hand ready to mail.

We guarantee safe delivery to any State, Continental Island, or European Country. Our Circular will interest you; it's free.

Address all orders to

Quirin-the-Queen-Breeder
PARKERTOWN, OHIO.

(The above ad. will appear twice per month only.) 16E13t

Please mention Bee Journal when writing

The AMERICAN INSTITUTE of PHRENOLOGY

Incorporated 1866. 39th Session opens Sept 2d. Subjects: Phrenology the Art of Character Reading: Anatomy, Physiology, Physiognomy, Heredity, Hygiene, etc. Address: 24 E. 22d St., New York, care of FOWLER & WELLS CO.

24Etf Please mention the Bee Journal.

FENCE! STRONGEST MADE. Bull Strong, Chicken-Tight. Sold to the Farmer at Wholesale Prices. Fully Warranted. Catalog Free.
COILED SPRING FENCE CO.
Box 89 Winchester, Indiana, U. S. A.

40Etf Please mention the Bee Journal

CARTONS FOR HONEY Wanted, to introduce the best, most practical, lowest-price Carton for honey, all things considered; costs nothing. We have wholesaled honey in this city for 30 years. We have seen no honey-carton equal to this. Send us five two-cent stamps, and we will send you sample, together with explanation, and some practical suggestions regarding marketing honey to best advantage; also live poultry. We originated and introduced the now popular one-pound section. Established in 1870.

H. R. WRIGHT, Wholesale Commission,
PROMPTNESS A SPECIALTY. ALBANY, N. Y.

30E3t Please mention the Bee Journal.

150 Nuclei for Sale
Strictly Red Clover Strain.

One 2-frame, Untested Queen $2.50
One 2-frame, Tested Queen 3.00

All in light shipping-boxes, on wired Langstroth frames.

34A1t A. D. D. WOOD, LANSING, MICH.

PAGE

If Our Agent

don't call on you soon, send for agent's terms.
PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

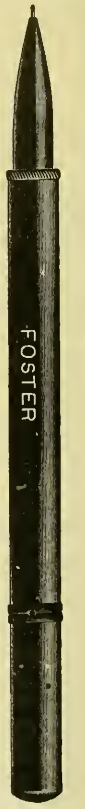
Please mention Bee Journal when writing.

If you want the Bee-Book

That covers the whole Apicultural Field more completely than any other published, send $1.20 to

Prof. A. J. Cook, Claremont, Cal.,
—FOR HIS—
"Bee-Keeper's Guide."
Liberal Discounts to the Trade.

BOYS WE WANT WORKERS Boys, Girls, old and young alike, make money working for us. We furnish capital to start you in business. Send us 10c stamps or silver for full instructions and a line of samples to work with. DRAPER PUBLISHING CO., Chicago, Ill.



(Exact size of the Pen.)

FREE as a.... Premium

A Foster Stylographic PEN....

This pen consists of a **hard rubber** holder, tapering to a **round point**, and writes as smoothly as a lead-pencil. The **point** and **needle** of the pen are made of **platina**, alloyed with **iridium**—substances of great durability which are not affected by the action of any kind of ink.

They hold sufficient ink to write 10,000 words, and **do not leak or blot.**

As they make a line of **uniform width** at all times they are **unequaled for ruling purposes.**

Pens are furnished in neat paper boxes. Each pen is accompanied with full directions, filler and cleaner.

BEST MANIFOLDING PEN ON THE MARKET.

19,000 Postmasters use this kind of a pen. The Editor of the American Bee Journal uses the "Foster." You should have one also.

How to Get a "Foster" FREE.

Send TWO NEW SUBSCRIBERS to the American Bee Journal for one year, with $2.00; or send $1.90 for the Pen and your own subscription to the American Bee Journal for one year; or, for $1.00 we will mail the pen alone. Address,

GEORGE W. YORK & CO.
144 & 146 Erie St., Chicago, Ill

no clipped queens. My average yield is from 50 to 60 pounds per colony, spring count, and I never rob my bees. I have had 10 new swarms so far this spring, and they were all very large; and I wish to state that every swarm could be hived sitting in a chair, and with perfect ease. Now, don't think I am jesting, for I am in earnest, as many of my bee-friends around here can testify. I will further say that during all these years only one swarm clustered over 4 feet high.

We have between 150 and 200 colonies of bees in this vicinity, and many have foul brood. I have it on all sides of me, from within a mile to 40 rods, and have never had a cell in any of my colonies, and you may guess how thankful I am. Our bee-keepers, whose bees have it, are getting rid of it as fast as they can, and when they all get it disposed of they will not invest in it again in this vicinity.

Right here, while on this very important subject to bee-men all over the United States, I wish to answer a question asked in the Chicago convention by Mr. Craven (see page 469). Question: Does it pay to feed sugar for the manufacture of honey with a view to profit? My answer is emphatically *No*. And I say also, and wish that I could be in the convention at Los Angeles, so that all bee-men could hear me, *Never* feed *sugar* to bees unless you want to cut off the head of the hen that lays the golden egg.

And now I want to be put on record as saying that there would never have been such a scourge as foul brood if all bee-keepers would deal honestly with their bees. Oh, that almighty dollar! Poor bees, those abundant winter stores taken away and adulterated sugar substituted, and still a little later, on close examination, oh, horrors, foul brood!

And now, my brother bee-keepers, I have not been joking. I know what I am saying, and later you will all know that I know, so get rid of foul brood, all you who have colonies so afflicted. If you feed, use nothing but pure honey, then foul brood will be no more.

J. M. HOBBS.

Yankton Co., S. Dak., July 27.

* * *

Close Saturdays a 1 p.m.—Our customers and friends will kindly remember that beginning with July 1, for three months we will close our office and bee-supply store at 1 p.m. on Saturdays. This is our usual custom. Nearly all other firms here begin the Saturday afternoon closing with May 1st, but we keep open two months later on account of the local bee-keepers who find it more convenient to call Saturday afternoons for bee-supplies.

Tennessee Queens.

Daughters of Select Imported Italian, Select long-tongued (Moore's), and Select, Straight 5-band Queens. Bred 3¼ miles apart, and mated to select drones. No bees owned within 2½ miles; none impure within 3, and but few within 5 miles. No disease. 30 years' experience. WARRANTED QUEENS, 60 cents each; TESTED, $1.25 each. Discount on large orders.

Contracts with dealers a specialty. Discount after July 1st

Send for circular.

JOHN M. DAVIS,

9A26t SPRING HILL, TENN.

Please mention Bee Journal when writing

Long Tongues Valuable

South as well as North.

How Moore's strain of Italians roll in the honey down in Texas.

HUTTO, TEX., Nov. 19, 1902.

J. P. MOORE.—Dear Sir:—I wish to write you in regard to queens purchased of you. I could have written sooner, but I wanted to test them thoroughly and see if they had those remarkable qualities of a three-banded Italian bee. I must confess to you I am more surprised every day as I watch them. They simply "roll the honey in." It seems that they get honey where others are idle or trying to rob; and for gentleness of handling, I have never seen the like. Friend E. R. Root was right when he said your bees have the longest tongues; for they get honey where others fail. I will express my thanks for such queens. I am more than pleased. I will stock my out-apiaries next spring with your queens.

Yours truly, HENRY SCHMIDT.

The above is pretty strong evidence that red clover is not the only plant which requires long-tongue bees to secure the greatest quantity of nectar.

Daughters of my 23-100 breeder, the prize-winner, and other choice breeders: Untested, 75 cents each; six, $4 00; dozen, $7.50. Select untested, $1.00 each; six, $5.00; dozen, $9.00. Safe arrival and satisfaction guaranteed. Circular free. I am filling all orders by return mail, and shall probably be able to do so till the close of the season.

J. P. Moore, L. Box 1, Morgan, Ky.

31Atf **Pendleton Co.**

Please mention Bee Journal when writing

$5 TO START YOU IN BUSINESS

We will present you with the first $5 you take in to start you in a good paying business. Send 10 cents for full line of samples and directions how to begin.

DRAPER PUBLISHING CO., Chicago, Ills.

Ready to fill orders for **ITALIAN QUEENS** from stock that for hardiness and good working-qualities is second to none. M.O. Office, Cleveland, Tenn.

CHESLEY PRESSWOOD,

31A4t McDONALD, Bradley Co., TENN.

Please mention Bee Journal when writing

BINGHAM'S PATENT Smokers

25 years the best.
Send for Circular.

25Atf **T. F. BINGHAM, Farwell, Mich.**

Business Queens,

Bred from best Italian honey-gathering stock, and reared in **FULL COLONIES** by best known methods. Guaranteed to be good Queens and free from disease. Untested, 75c each; 6. $4.00. Tested, $1.25 each. **CHAS. B. ALLEN,**
Central Square, Oswego Co., N. Y.

☞ This ad will not appear again this season.

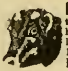
18Atf Please mention the Bee Journal.

Wanted to Sell 10 COLONIES OF BEES in dovetailed eight frame hives. Good condition. Address at once,

L. E. COX,

33A2t R. F. D. 27, Hortonville, Ind.

Please mention Bee Journal when writing



DAIRYMEN ARE DELIGHTED to meet those who work for us. Cow keepers always have money. We start you in business. You make large profits. Easy work. We furnish capital. Send 10 cents for full line of samples and particulars.

DRAPER PUBLISHING CO., Chicago, Ills.

Please mention Bee Journal when writing

BEE-SUPPLIES!

ROOT'S GOODS AT ROOT'S PRICES.

Everything used by bee-keepers.
POUDER'S HONEY-JARS. Prompt service. Low Freight Rates.
NEW CATALOG FREE.

WALTER S. POUDER.

512 MASS. AVE. INDIANAPOLIS, IND.

HONEY AND BEESWAX

MARKET QUOTATIONS

CHICAGO, Aug 7.—Consignments of the new crop are coming to commission houses that have not had honey for years past, and as there is not any consumptive demand they are finding difficulty in disposing of it. Under such conditions it is hardly possible to give accurate prices, as some merchants ask 10 cents for honey that others hold at 15 cents. The prices given in our last quotations are asked, but feeling is unsettled. Beeswax steady at 30c.

KANSAS CITY, July 28—Some new comb honey in market, but on account of hot weather the demand is not heavy, but will be getting better every day. Fancy white comb, 24 sections, per case, $3.50; No. 1, white and amber, 24 sections, per case, $3.25; No. 2, white and amber, 24 sections, per case, $3.00. Extracted, white, per pound, 6@6½c; amber, 5½c. Beeswax, good demand, 25@30c. C. C. CLEMONS & CO.

ALBANY, N. Y., July 18—We are receiving some shipments of new comb honey, mostly from the South; the demand light as yet; we are holding at 15@16c. Extracted slow at 6@7c. The crop of honey in this vicinity is very light, and we shall have to depend upon other sections more than ever for our supply of honey. Beeswax, 30@32c. H. R. WRIGHT.

CINCINNATI, Aug. 6—The supply about equals the demand for extracted honey. We are selling amber extracted in barrels from 5½@6½c, according to quality. White clover, barrels and cans, 7@8½c, respectively. Comb honey, fancy, in no drip shipping cases, 16@16½ cents. Beeswax, 30c. THE FRED W. MUTH CO.

NEW YORK, July 8.—Some new crop comb honey now arriving from Florida and the South, and fancy stock is in fair demand at 14c per pound, and 12@13c for No. 1, with no demand whatever for dark grades.

The market on extracted honey is in a very unsettled condition, with prices ranging from 5@5½c for light amber, 5½@6½c for white. and the common Southern at from 50@55c per gallon. Beeswax steady at from 30@31c.

HILDRETH & SEGELKEN.

CINCINNATI, Aug. 8.—New honey is now offered very freely, particularly extracted. The demand for honey is about as usual at this time of the season. I made sales at the following figures: Amber, 5@5½c; water-white alfalfa, 6½c; fancy white clover honey. 7@7½c. Comb honey, fancy water-white, brings from 14@15c. Beeswax, 27@30c. C. H. W. WEBER.

SAN FRANCISCO, July 22.—White comb honey, 11½@13½c; amber, 8@10c. Extracted, white, 5¼@5 c; light amber, 4¾@5c; amber, 4¼@4½c; dark. 3¾@4¼c. Beeswax, good to choice, light, 27½@29c; dark, 25@26c.

This season's crop is not only unusually late, but is proving much lighter than was generally expected. While the market is unfavorable to buyers, the demand at extreme current rates is not brisk and is mainly on local account.

WANTED! Extracted Honey.

Send sample and best price delivered here; also Fancy Comb wanted in no-drip cases.

THE FRED W. MUTH CO.

32Atf Front and Walnut, CINCINNATI. OHIO.

WANTED—Comb Honey in quantity lots. We are perhaps the only dealers in this article owning as much as 150,000 pounds at one time. Please state quantity, quality and price asked for your offerings, **Thos. C. Stanley & Son.**

24Atf MANZANOLA, COLO., or FAIRFIELD, ILL.

Please mention Bee Journal when writing

WANTED—Extracted Honey.

Mail sample and state lowest price delivered Cincinnati. Will buy FANCY WHITE COMB HONEY, any quantity, but must be put up in no-drip shipping-cases.

C. H. W. WEBER,

2146-48 Central Ave., CINCINNATI, OHIO.

24Atf Please mention the Bee Journal.

WANTED!

TO BUY—White Clover Comb and Extracted **HONEY**—also Beeswax. Spot cash. Address at once, **C. M. SCOTT & CO.**

33Atf 1004 E. WASH. ST., INDIANAPOLIS, IND.

Please mention Bee Journal when writing

The Best Bee-Goods in the World....

are no better than those we make, and the chances are that they are not so good. If you buy of us **you will not be disappointed. We are undersold by no one.** Send for new catalog and price-list and free copy of THE AMERICAN BEE-KEEPER; in its thirteenth year; 50 cents a year; especially for beginners.

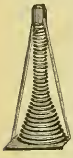
—THE—

W. T. Falconer Mfg. Co.,
JAMESTOWN, N. Y.

W. M. Gerrish, Epping, N.H., carries a full line of our goods at catalog prices. Order of him and save the freight.

Please mention Bee Journal when writing.

Queen-Clipping Device Free!



The Monette Queen-Clipping Device is a fine thing for use in catching and clipping Queens' wings. It is used by many bee-keepers. Full printed directions sent with each one. We mail it for 25 cents; or will send it **FREE** as a premium for sending us One New subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device. Address,

GEORGE W. YORK & CO.,
144 & 146 E. Erie St., - CHICAGO, ILL.

INVESTMENTS
—IN—
SOUTHERN LANDS.

Such investments are not speculative. The South is not a new country. Market and shipping facilities are adequate and first-class. The climate is mild and favorable. Notwithstanding these and other advantages, Southern lands are selling for prices far below their real value, and at present prices net large returns on the investment. For a free set of circulars, Nos. 1 to 10, inclusive, concerning the possibilities of lands in Kentucky, West Tennessee, Mississippi and Louisiana, on and near the Illinois Central Railroad, for homeseekers and investors, address the undersigned,

A. H. HANSON, G. P. A., Chicago.
26A12t Please mention the Bee Journal.

Italian Queens, by Mail.
Golden and Honey Queens.

July and August.	1	6	12
Honey Queens (Untested)..	$ .75	$ 4.00	$ 7.00
" " (Tested)....	1.25	7.00	13.00
Golden " (Untested)..	.75	4.00	7.00
" " (Tested)....	1.25	7.00	13 00
2-frame Nucleus (no queen)	2.00	11.00	21.00

Breeders, $3.00 each, after June 1.

Add price of any Queen wanted with Nucleus.
Our bees are shipped in light shipping-cases.
Purchaser pays express on Nuclei.
Safe arrival guaranteed of all stock sent out.

Oconomowoc, Wis., Aug. 1, 1903.
I like your queens. The best of any that I ever had. Respectfully yours,
Frank D. Gunderson.

Litchfield, Ill., Aug. 3, 1903.
Dear Sir:—Enclosed please find money order for $1.50 for which send me two untested honey-queens. The one I bought of you two years ago is all right. There are no better.
Respectfully yours,
Gus Picaman.

Notice. — No tested stock sent out before May 15. Send money by P. O. Money Order or Express Order. **D. J. BLOCHER.**
17Atf PEARL CITY, ILL.

26th Year Dadant's Foundation 26th Year

We guarantee Satisfaction. What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS. PATENT WEED-PROCESS SHEETING.

Why does it sell so well? Because it has always given better satisfaction than any other. Because in 25 years there have not been any complaints, but thousands of compliments.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

Bee-Keepers' Supplies OF ALL KINDS *****

Very fine pure-bred **BARRED PLYMOUTH ROCK** Chickens and Eggs for sale **at very low prices.**

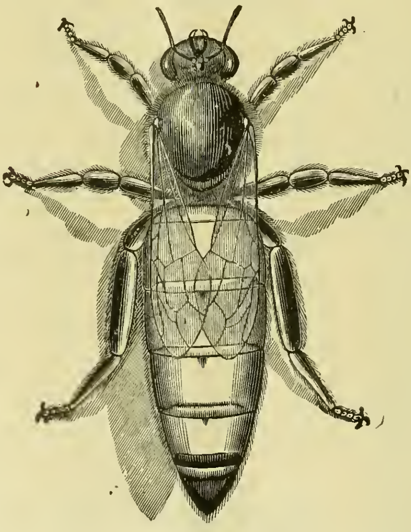
Langstroth on the Honey-Bee—Revised,
The classic in Bee-Culture—Price, $1.20, by mail.

BEESWAX WANTED at all times.

DADANT & SON,
Hamilton, Hancock Co., Ill

Please mention Bee Journal when writing

RED CLOVER HONEY-QUEENS.



Spring Bluff, Wis., July 18, 1903.
The A. I. Root Co., Medina, Ohio.
Dear Sirs:—I thought I would write you a few lines in regard to the Red Clover Queen I got from you. They haven't swarmed yet this summer, but I have taken 48 sections from them and there is 24 more all ready to come off.

Just think, 72 nice sections of as nice honey as ever was made. and only July 18th. It seems as though they will surely fill 48 more.

I don't know whether their tongues are any longer than any of the others, or whether they gathered it from Red Clover, but surely such bees are worth money.

I use the 8-frame Jumbo frame.
C. E. Kellogg.

C. E. Kellogg, Spring Bluff, Wis.
Dear Sir —We have yours of July 18th and would be glad to have you advise us by return mail with reference to the capping of the honey. Some parties say the capping from these bees is not white, and we would be glad to have you advise us how your honey is in this respect, and oblige, Yours truly,
The A. I. Root Co.

Spring Bluff, Wis., July 31, 1903.
The A. I. Root Co., Medina, Ohio.
Dear Sirs:—Yours of July 24th at hand to-day. In regard to your question in reference to the cappings of the honey from these bees I will say that it is simply perfect, beautiful snow-white and every box perfect. 96 one-pound sections now. I am quite sure they will fill two more supers, which will bring the number up to 144. I would like very much to have you see a few of those sections, and I will be glad to send you a few.

Now, I haven't told you ALL their good qualities yet. I am sure they are by far the most gentle bees to handle I have. I could take off the sections without smoke or veil without getting stung.

There are a few traits about them that seem to me are quite remarkable aside from their honey-gathering; they don't seem to want to swarm.

I will write you again in a few weeks and let you know if they fill the 144 sections, which I am sure they will. Respectfully,
C. E. Kellogg.

AGAIN READY FOR PROMPT DELIVERY.

We were snowed under with orders for a few weeks, but here we are again with good Queens and prompt service.

Red Clover and Honey Queens.

	Each.	Six.
Untested	$1.00	$ 5.70
Tested	2.00	11.40
Select Tested	3.00	17.10

	Each.
Breeding	$ 5.00
Select Breeding	7.50
Extra Select Breeding	10.00

With any of the last three we include one frame of bees and brood to insure safe arrival, for which we make no charge. These must be sent by express. Queen circular free.

THE A. I. ROOT CO., Medina, Ohio.

AMERICAN BEE JOURNAL

43d Year. CHICAGO, ILL., AUG. 27, 1903. No. 35.

WEEKLY

APIARY OF JOHN WITT, OF COOK CO., ILL.

F.B. WHITE CO. CL.

THE AMERICAN BEE JOURNAL

PUBLISHED WEEKLY BY
GEORGE W. YORK & COMPANY
144 & 146 E. Erie St., Chicago, Ill.

Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

EDITOR,
GEORGE W. YORK.

DEPT. EDITORS,
DR. C. C. MILLER, E. E. HASTY, EMMA M. WILSON

IMPORTANT NOTICES.

The Subscription Price of this Journal is $1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

The Wrapper-Label Date of this paper indicates the end of the month to which your subscription is paid. For instance, "dec03" on your label shows that it is paid to the end of December, 1903.

Subscription Receipts.—We do not send a receipt for money sent us to pay subscription, but change the date on your wrapper-label, which shows you that the money has been received and credited.

Advertising Rates will be given upon application.

National Bee-Keepers' Association

Objects of the Association:

1st.—To promote the interests of its members.
2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

ANNUAL MEMBERSHIP, $1.00.
Send dues to Treasurer.

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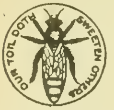
☞ If more convenient, Dues may be sent to the Secretary, at the office of the American Bee Journal.


OUR TOIL DOTH SWEETEN OTHERS

A Celluloid Queen-Button is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-lapel. It often serves to introduce the subject of honey, and frequently leads to a sale.

The picture shown herewith is a reproduction of a motto queen-button that we are furnishing to bee-keepers. It has a pin on the underside to fasten it. Price, by mail, 6 cents; two for 10c; or 6 for 25 cents. Send all orders to the office of the American Bee Journal.

200 Nuclei with Red Clover Italian Queens

Ready for Immediate Delivery.

We have arranged with a bee-keeper having a large apiary adjoining Chicago, to furnish us with Nuclei, each having a Red Clover Queen reared from one of Root's specially selected Red Clover Breeding Queens. They will be shipped direct from the apiary at these prices, cash with the order:

One 3-frame Nucleus with queen, $3.50; 5 or more at $3.00 each—on standard Langstroth frames in light shipping-boxes.

Or, we can furnish these Nuclei in 8-frame hives containing 3 extra brood-combs and 2 extra frames with foundation starters, at these prices:

One Nucleus for $4.50; or 5 at $4.00 each.

With a good fall honey-flow these Nuclei can easily be built up into good, strong colonies for wintering.

Address all orders to
GEORGE W. YORK & CO.,
144 & 146 East Erie Street, CHICAGO, ILL.

Dr. Miller's New Book

SENT BY RETURN MAIL.

The book contains 328 pages, is bound in handsome cloth, with gold letters and design; it is printed on best book-paper, and illustrated with over 100 beautiful original half-tone pictures, taken by Dr. Miller himself. It is unique in this regard.

The first few pages of the new book are devoted to an interesting biographical sketch of Dr. Miller, telling how he happened to get into bee-keeping. Seventeen years ago he wrote a small book, called "A Year Among the Bees," but that little work has been out of print for a number of years. While some of the matter used in the former book is found in the new one, it all reads like a good new story of successful bee-keeping by one of the masters, and shows in minutest detail just how Dr. Miller does things with bees.

HOW TO GET A COPY OF DR. MILLER'S "FORTY YEARS AMONG THE BEES."

The price of this new book is $1.00, post-paid; or, if taken with the WEEKLY **American Bee Journal** for one year, BOTH will be sent for $1.75.

Or, any present regular subscriber to the American Bee Journal whose subscription is paid in advance, can have a copy of Dr. Miller's new book *free as a premium* for sending us **Two New Subscribers** to the Bee Journal for one year with $2.00. This is a magnificent offer, and should be taken advantage of at once. For many of our readers it is not only an easy way to earn a copy of the book, but at the same time they will be helping to extend the subscription list of the old American Bee Journal, and thus aiding also in spreading the best kind of apicultural information among those who would be successful bee-keepers.

Address all orders to
GEORGE W. YORK & CO,
144 & 146 E. Erie Street, CHICAGO, ILL.

ESTABLISHT IN 1861

AMERICAN BEE JOURNAL

THE OLDEST BEE-PAPER IN AMERICA

43d YEAR. CHICAGO, ILL., AUG. 27, 1903. No. 35.

Editorial Comments

How to Avoid Killing Bees.—There are some things that every bee-keeper naturally learns by experience that are not always found in text-books of instruction in bee-keeping. One of these relates to the matter of killing bees. In some apiaries hundreds, or thousands, of bees are killed in the course of a year simply by mashing them when covers or supers are put on hives. The case is unusually bad when a large amount of smoke has been used. The bees run out of the hive, boiling over all around, and by the time the operator is through with his manipulations there is a layer of them half an inch thick or more all around on the upper edge of the sides and ends of the hive. If now the cover be quickly placed over, a large portion of these bees will be killed. If the operator is touched with a feeling of pity for the little innocents, and slowly lets down the cover upon them, so as to give them time to get out of the way, the result is but little better. After their stampede the bees appear just a bit stupid, and make no move to get out of the way till the cover presses down uncomfortably upon them, and then it is too late, for they are held fast in spite of all efforts to get away while the cover is slowly crushing the life out of them.

The experienced operator will put on the cover without killing a bee. In the first place, he will seldom have so many bees in the way, for he does not find it necessary to use so much smoke. But if there should be a border of bees an inch thick all around, he is still master of the situation. A little smoke is puffed lightly upon the border of bees just to stir them up enough so that they will be inclined to "move on," and then the operator takes the cover in hand. Instead of holding the cover level over the place where it belongs, one end of the cover is raised 10 or 12 inches, and the other end is allowed to touch the hive. Neither does it touch the hive the whole width, but just the corner of the cover farthest from the operator is allowed to touch the nearest corner of the hive. Still holding the cover with one end raised, he slides it from him across the width of the hive. Then allowing this end of the cover to remain resting on the hive, he quickly drops the other end 3, 4, or more inches, and as quickly raises it again. The bees that were squeezed by the dropping of the cover will get out of the way when it is raised. Without waiting an instant, he rapidly moves the cover up and down, each time raising it not quite so high as it was raised before, and lowering it just a little more. At the last, when the cover is raised only an inch, or half an inch, a few rapid vibrations up and down gets the last bee out of the way, and he can tell pretty well by the feeling when the cover no longer strikes upon the bees but upon the solid hive, and the cover is then allowed to rest. All this is so rapidly done that it does not take so much time as seems in the telling, and it is well that each novice should in the start begin practicing to save the lives of his bees.

Cages for Shipping Queens Abroad.—J. P. Moore is reported in Gleanings in Bee-Culture to have succeeded in "sending about 95 percent of his queens through alive to foreign countries." For mailing queens to England he uses two Benton cages fastened together face to face without any wire-cloth. Besides the candy, two small tubes are contained, one filled with water, the other with honey. The candy varies from the usual formula a little, and it is just possible that it might be a good thing for domestic as well as foreign mailing. He says:

> The candy is made of powdered sugar and honey, with the addition of a little glycerine, to prevent it from drying out and becoming hard. It is made as follows:
>
> To seven cups of powdered sugar add one cup of nice, well-ripened honey; knead thoroughly, and make into three or four balls. Let it stand a few days; then break the balls up and pour a little glycerine over the mass, and work in more powdered sugar. Make into balls as before, and let it stand a day or two, when it is ready for use, if you have added enough sugar and not too much. If the balls flatten down the candy is too soft, and must have more sugar; but if they retain their shape, and have a moist appearance, the candy is just right. When just right, it is soft and pliable, and retains its shape when made into balls.

Are Queens Injured by Sudden Cessation of Laying?—On page 505, Mr. Hasty says:

> "My idea of the thing is that injury (if any) by suddenly compelling a laying queen to cease laying would all come in the first week. Twelve weeks no worse than six, so far as the laying matter is concerned."

Evidently he is not in accord with what is perhaps a commonly accepted view, that the *suddenness* of the cessation does mischief, as if violence were done to the queen by compelling her to retain eggs that she feels impelled to lay. Really, is there anything in that view? Is there any violence in the case whatever? A queen can continue—does continue to lay—when suddenly removed from the combs, proven by the eggs dropped on the floor-board of a swarm before any combs are built. Is there, then, such a great *suddenness* in the cessation?

Destroying Queen-Cells to Prevent Swarming.—When the beginner has reached that point where it seems desirable to him to prevent swarming, one of the first things that occur to him is to cut out queen-cells. As the building of queen-cells is a part of the regular program of swarming, if they be regularly destroyed every few days the rest of the program can not be carried out, and he thinks there will be no swarming. He is surprised, however, to be told that this can not at all be relied upon to prevent swarming. If constantly thwarted in their efforts by the destruction of queen-cells, the bees become desperate and swarm out just as soon as an egg is laid in a queen-cell—possibly not waiting for that. The inefficiency of destroying cells as a means of preventing swarming has been so emphasized that some seem to have the impression that it has no effect whatever.

It does, however, have an appreciable effect, indeed to such an extent that one with bees not especially given to swarming may go through the season with very little of it. If, upon examination, queen-cells be found in a colony, and they are destroyed, the bees *may* swarm the very next day. But this is not likely. They may at once start cells again, only to be destroyed again by the bee-keeper on his next round, and if he goes through his colonies for cells every 10 days or so he will find some colonies that will keep up this battle with him the entire season without swarming. In other cases he will find the bees not so constant in their attempts. On one of his rounds he destroys cells in a certain colony, and the next time he finds none. On subsequent visits he may find cells started, and he may not.

Without actually recommending the cutting out of queen-cells as a means of preventing swarming, it is only fair to say that it is possible that one, especially if he can be present with the bees only a short time each day, may go through the season quite satisfactorily, provided he has a number of nuclei with young queens, or is willing to buy young queens. Suppose he has only a few colonies, and is present with them only an hour or so each morning; or suppose he has a number of colonies in an out-apiary that he visits only once in 10 days or so. He has all his queens clipped as an indispensable proviso. He regularly destroys queen-cells in all colonies every 10 days or so, and so long as there is no swarming all is clear sailing. On one of his visits, however, he finds a colony with sealed cells and no eggs or young brood. He knows then that this colony has swarmed. All the same he destroys all queen-cells, and the next time round he gives it a young laying queen, and counts pretty safely that no more foolishness in the way of swarming will be considered by that colony for the rest of the season.

That's the whole program; destroy cells every 10 days, and when a colony is found queenless give it a young laying queen at the next subsequent visit. It may not suit many, but the plan is not altogether to be despised.

The above program has been carried out in a good many cases in a certain locality this year as well as other years, and it gets the honey.

Shall Swarms be Shaken Before Preparations for Swarming?—Some think it better to anticipate any action on the part of the bees by shaking before the time comes for the bees to start queen-cells, while others prefer to postpone action till queen-cells are found in process of construction. What may be best in one locality, or for one person, may not be best for another.

Where one can forestall swarming, and feel sure that is the end of it for the season, there is quite a comfortable feeling of being master of the situation. Granted that the shaking may interfere to some extent with the crop, the question may be asked whether it interferes any more—whether it interferes as much—as would swarming. Even if a little less may be obtained from each colony, the total crop may be increased by the shaking, for with the swarming question out of the way one can take care of enough more bees to more than make up all loss that comes from shaking. For, after all, in most cases the amount of work involved is the important factor in the problem. Less work and more bees will result from getting the swarming nuisance out of the way in advance.

But all may not be able to clear the track thus in advance. Too early shaking will with them only make the swarming demon more troublesome right in the harvest time. There may be sufficient reason why for them it may be best to keep on the watch for swarming preparations, only taking action when queen-cells are found in the hive. It will require work to go through the hives at stated times looking for cells. Still, one accustomed to the work will do it rapidly, and the results may justify the expenditure of labor. There will, too, be always ahead the alluring prospect of some colonies that will make no preparation for swarming whatever throughout the whole season, and they will be the record-making colonies. If all were shaken in advance no discrimination could be made, for it would not be possible in advance to select those colonies which would be complaisant enough to refrain from swarming.

This whole matter of shaken swarms is yet more or less unsettled, and it is to be hoped that experience, careful observation, and liberal exchange of views will so increase our knowledge regarding it that in the near future each one may have some more definite idea as to what shall bring the best practical results in his own case.

ASHLEY VALLEY, UTAH, seems to be a veritable bee-keepers' paradise, according to E. S. Lovesy, who grows eloquent over it in the Rocky Mountain Bee Journal. Enormous records have been made, some of them exceeding 1000 pounds to the colony. About a hundred bee-keepers occupy the valley, some of them having five and six apiaries with from 150 to 200 colonies in each yard, "and all of them rushing in with their loads of beautiful white honey." Those who might think of moving to this paradise are warned off by Editor Morehouse, who says the valley is now fully stocked, and no new bee-keeper should crowd in on those already there.

But he awakens interest in the Uintah Indian Reservation, which will be opened to settlement Oct. 1, 1904, saying:

> The Uintah Reservation is similar to the Ashley valley, and when settled its valleys will produce honey as lavishly as the celebrated country around Vernal. It is now far isolated from railroads, but the Denver, Northwestern & Pacific, now building, will cross its borders and open its magnificent resources to commerce and civilization.

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The Premiums offered this week are well worth working for. Look at them.

Convention Proceedings

Proceedings of the Texas Bee-Keepers' Convention Held at the A. & M. College, at College Station, July 8 to 10, 1903.

BY LOUIS H. SCHOLL, SEC.

(Continued from page 535.)

The following paper was presented by Wilmon Newell, who had charge of the experimental work referred to by Prof. Sanderson:

REPORT OF THE EXPERIMENTAL APIARY OF THE TEXAS A. & M. COLLEGE FOR 1902-3.

The Experimental Apiary was established in May, 1902, with an appropriation of $500 for the first year's work, or until Sept. 1, 1902. The itemized account of how this money was expended, as well as the work accomplished up to Sept. 1, 1902, will be found in the "Report Upon the A. & M. College Apiary," which was published during the past winter. Of this report 1500 copies were printed, but owing to lack of funds, copies were mailed to only a few in response to most urgent requests. Several hundred inquiries were received at the office of the entomologist for this report, showing that the bee-keeping industry in Texas is rapidly growing, and the demand for information enormous. Copies of this report may be had free of charge by applying to the secretary of the Association, or to the State entomologist.

For the year 1902-3, the sum of $250 was available. This sum was totally inadequate for the work proposed, especially as the first year's work and funds were insufficient to build up the apiary to the proper size and condition for careful experimental work. The sum of $250 was exhausted by March 1, 1902, and since that time the experimental apiary has been run mostly by main strength—and donations from charitably inclined individuals. Running a private apiary purely for the commercial gain to be derived therefrom, and running an experimental apiary with no possible source of revenue, are two distinct and different propositions, which fact is not always taken into account by the outsider. A number of reasons, and chief among them the necessity of a large and varied equipment, make the conducting of an experimental apiary by far the more expensive of the two. The $250 above mentioned was expended as follows:

Bees and queens	$45 40
Hives and apparatus	64 39
Tools, fence, and accessories to bee-house	39 43
Books and magazines	16 30
Feeding in fall of 1902, made necessary by dry season	6 00
Seeds and plants for experiments with cultivated honey-plants	15 83
Improvement in main building office	6 00
Travel (foul brood inspection and assistance)	21 10
Freight and express	18 31
Postage and telegrams	14 90
Incidentals	2 34
Total	$250 00

Owing to the shortage of funds, some lines of experimental work undertaken in 1902 had to be entirely abandoned, while the results with many other experiments were neither satisfactory nor conclusive, owing to the small number of colonies engaged in them.

HONEY-PLANTS.

In the fall and winter of 1902 considerable attention was given in the current numbers of the bee-papers to a California plant designated as "carpet grass," very flattering reports being given as to its honey-producing qualities and resistance to drouth. We were unable to ascertain the species of this plant, and accordingly secured from Sutter Co., Calif., through the courtesy of Mr. J. H. Erich, of that county, living "carpet grass" plants. These were planted out immediately upon their arrival, and grew fairly well. Some time after securing these plants, its name of *Lippia nodiflora* was published in the bee-papers. When the plants at College Station began blooming in the latter part of May, they were not only found to be this species, but were also *identical* with the form of this species occurring in central Texas. This plant can be found along the banks of streams, and on the sandy knolls adjoining stock tanks. As a honey-producer in central Texas, at least, it is absolutely worthless. The bees visit it but rarely, and only then in the absence of all other nectar-yielding plants.

A small field of alfalfa was planted on the upland at College Station in the fall of 1902, and in spite of the abundant winter rains following, died out completely by May 1. The seed germinated and came up well, but the soil was evidently too poor for its growth.

The writer has often noticed that California privet—which shrub is largely planted for ornamental hedges in many parts of Texas—when in bloom, is visited by many bees, and the nectar secured is evidently considerable. With a view to determining the value of this shrub as a honey-producer, a small grove was planted during the past winter. Here, again, the lack of help asserted itself, and the work had to be abandoned when about one acre had been planted out. It is proposed to continue this planting until the grove contains at least three acres, and this, in three or four years, should give a good indication of what may be expected from this plant.

In March, the seed of several plants, including catnip, teasel, milkweed and sweet clover (Melilotus), were planted in carefully prepared soil. None of them grew.

Of over 40 different plants tested during 1902 and 1903, only borage, mustard, mignonette, Japanese buckwheat, sweet-peas, cow-peas, and California privet promise to thrive under soil and weather conditions existing at College Station. Of these only borage, mignonette, Japanese buckwheat and privet offer any prospect of being profitable if grown on a commercial scale for honey alone.

"PELLONCILLOS."

This, an unrefined sugar manufactured in Mexico, is familiar to the great majority of Texas bee-keepers, and especially to those of the Southwest, who have often used it for feeding in "off" years.

With a view to testing its food-value for bees, and its cost as compared to sugar, we secured last autumn about 40 pounds of this sugar. The sugar, as ordinarily sold, is in small cones containing about 13 ounces each, wrapped with corn-husks. In December several of these cones were placed in an empty super over a strong colony in need of stores. The bees worked at it slowly but steadily, and at the end of a month over half the sugar still remained in the super.

On Feb. 10, 11 and 12, the weather being warm and sunny, out-door feeding was resorted to as many of the colonies were short of stores. About 100 yards from the apiary three feeders were placed. One containing dry pelloncillos, one syrup made from pelloncillos and cold water, and the other contained ordinary sugar syrup made from granulated sugar (in the proportion of one part granulated sugar to 1½ parts water). The bees showed a decided preference for the granulated-sugar syrup, and took it fully four times as rapidly as the "pelloncie" syrup. The dry pelloncillos were visited by only an occasional bee.

The day following many dead bees were found in front of all the hives, and in the afternoon a full quart of bees, dead and dying, were found bunched together by the "pelloncie" feeder. Analysis of the "pelloncie" syrup was made by Prof. H. H. Harrington, State Chemist, and was found to contain a large percentage of acetic acid. The dry pelloncillos were then examined, and *were also found to contain acetic acid*. The large organic content, aside from sugar, is most favorable for acetic acid fermentation. The presence of a considerable amount of water, for this fermentation to take place, is not necessarily essential. For this reason we must conclude that the use of pelloncillos for feeding bees is a most dangerous practice, and in no case should be undertaken without first testing the sugar for acid, and even while being fed it should be tested with litmus paper every day to be certain that no fermentation is taking place.

FEEDING EXPERIMENTS.

An experiment in stimulative feeding was undertaken the past spring, but owing to the limited number of colonies the results obtained were not conclusive.

In the experiment six colonies, each having six frames of bees (practically 6-frame nuclei) were used. Colonies 8 and 9 (old series) were fed from Feb. 13 to April 13, with Doolittle (division-board) feeders, at the rate of one-half pint of syrup per day (granulated sugar one part, to water 1½ parts), the feeding being omitted on cool and rainy days, when the bees refused to take the syrup from the feeders.

Colonies 2 and 12 were fed in the same way from March 6 to April 13. Colonies 1 and 3, for comparison, received no feed. At the beginning of the experiment these colonies (6-frame nuclei) were, so far as could be determined, in the same condition. All were in 10-frame dovetailed hives, and all had 3-banded Italian queens.

Summing up the results: Nos. 1 and 3 together produced (up to June 1) 15 pounds of extracted honey. Colonies 8 and 9 were fed in all 8 26-100 pounds of sugar, which, at 6 cents per pound, cost 50 cents. These two colonies together produced a surplus of 23½ pounds, a gain of 8½ pounds over the unfed colonies. Honey of the same quality and kind sold in Bryan, Tex., at this time for 7 cents. The gain over the unfed colonies was therefore 59 cents, obtained at a cost of 50 cents; profit 9 cents.

Colonies 2 and 12 received in all 5.8 pounds of sugar, which cost 35 cents. These two colonies produced only 15 pounds of surplus, which was the amount produced by 1 and 3 without feed. Loss, 35 cents. The above results would indicate that the feeding commenced early (Feb. 13), was far more profitable than the feeding commenced later on (March 6). The above amounts of surplus seem very small, but the fact that only nuclei were used in the experiment readily explains that point. Had full colonies been used the total yields would have been much larger, and doubtless the benefit (or loss) have been more marked.

We are prone to believe from this experiment, as well as from previous observations, that whether or not stimulative feeding will prove profitable in the increased honey-production will depend largely upon the price paid for sugar, the selling price of the honey secured, and the length of time available for building up the colonies before the main honey-flow commences. For example, in the above instance it is seen that the colonies which were given from Feb. 13 to April 13 to build up not only paid for the sugar furnished them, but made a narrow margin of profit besides. On the other hand, the colonies which were given from March 6 to April 13 to build up, did not even pay for a part of the sugar fed them.

As an illustration of the bearing of the prices of sugar and honey upon the results, suppose that in the case of colonies 8 and 9, the sugar had been purchased at 5 cents and the honey sold for 8 cents. The profit would have been 27 cents instead of 9 cents. Again, as a somewhat extreme case, suppose that the honey obtained were of good quality and retailed direct by the bee-keeper at 10 cents. The profit due to feeding colonies 8 and 9 would have been (with sugar at 5 cents) 45 cents.

Two full colonies were also used in a similar experiment, one being fed and the other not fed. In this case the fed colony produced but 3 pounds more surplus than the unfed colony, with a resultant loss of 12 cents. In the case of these colonies, had the sugar been bought for 5 cents a pound, and the honey sold for 10 cents, the gain in honey would have exactly paid for the sugar fed. In other words, neither profit nor loss. The value of the time necessary to do such feeding is not taken into consideration. These results are not considered by any means as conclusive, but are presented as showing how a very small variation in the price of sugar, or in the selling price of honey, will determine whether stimulative feeding will return a profit or a loss.

SECTION HONEY VS. EXTRACTED.

The present season has but confirmed our former opinion, that the vicinity of the College is totally unadapted to the production of section honey. A slow honey flow, an abundance of propolis, and above all, a dark honey, are the main deterrent factors. This makes the use of hives, specially constructed for section-honey production—such, for example, as the Danzenbaker—inadvisable. An interesting observation was made the past spring in connection with the latter hive. 4x5 plain sections, with fences and foundation starters, were placed upon one Danzenbaker hive, and upon one 10-frame dovetailed hive. The colonies in both these hives were 3-banded Italian, and, as nearly as could be determined, of the same strength. Now, as to results: The colony in the Danzenbaker hive produced 11 sections that graded No. 2, and 13 partially filled sections that could not be graded other than culls. The colony in the 10-frame dovetailed hive produced 15 No. 1 sections and 14 No. 3 sections. We have no explanation to offer.

On account of the abundance of propolis the use of closed-end frames, in most parts of Texas, is not practicable, and their use by beginners is not to be recommended. Among extensive bee-keepers rapidity of manipulation is a most important consideration. With such a hive as the

Danzenbaker rapidity of manipulation—as that term is commonly understood in Texas—is impossible.

In some localities propolis is so abundant as to make even the Hoffman frame an undesirable one. This is notably the case in the Brazos bottom, but a few miles from the College. It has been the custom of many bee-keepers to overcome this difficulty by the use of the "all-wood" frame, which must be spaced "by guess." For many reasons a self-spacing frame is to be desired, and in localities where propolis is abundant we heartily endorse the metal-spaced frame. These frames may be seen in the Experimental Apiary.

(Continued next week.)

Contributed Articles

Shaken or Forced Swarms—Objections Answered.

BY E. F. ATWATER.

ADRIAN GETAZ, on page 407, relates an experience very different from my own.

"I shook a few swarms several years ago," says Mr. Getaz. Well, so did I, and with the passing years I have shaken more, until I can now safely say that I have made scores, if not hundreds, of such swarms in the last two years. Mr. Getaz says, "As to preventing swarming, it was a great success." My experience is the same, if shaken on comb foundation *starters only*. With full sheets it is not an invariable preventive; on full combs it is even less certain with queens of various ages.

Swarms shaken on combs of *sealed brood* often prepared for swarming again, unless given a ripe queen-cell, instead of their queen (Aikin), and this latter is a very practical plan, a complete success.

Now, for the objections raised by Mr. Getaz:

1. "To carry it out on a large scale, it would be necessary to have a number of extra hives, which would involve a considerable cost." That's very true, but if the profits more than compensate one for this extra cost, what matter?

2. His second objection, crooked comb and drone-comb built in the brood-nest, where, apparently, no frames were placed. Why, Mr. Getaz, how about the *age* of the queens? Also, if the bees were not at work in the sections before being shaken, you may be sure that they will *often* build comb in an empty brood-nest first, where there are no little section-boxes or separators to divide the cluster. If the supers had contained *drawn* comb, or had been taken from other colonies well at work in the sections, the results might have been very different, for to insure *slow work* in the brood-nest, and the building of mostly worker-comb from mere starters, the bees must be working vigorously in the sections, almost as soon as hived.

3. "The queens will go into the sections unless prevented by a honey-board." If they do, wait a *few* days before adding the supers, or give a comb below. *Here*, the honey-board is "an expense"—a blessing, not "a nuisance"—and so an expense gladly met.

4. "Some pollen....in sections." Give them a comb of brood or an empty comb below, which will usually lessen or do away with that trouble.

"Moderate increase, taking one comb of brood out of each colony every few days and replacing it with a frame of foundation." Nice plan, that, for my ten out-yards, isn't it? And more, in a fine flow my bees (mostly Italians) will pull out that sheet of foundation and fill it with honey, so that it acts very much as a division-board, practically confining the queen to one side of the hive, and so inducing swarming.

Now, to go back to objection No. 2. If the shaken swarms "did nothing, or very little, in the sections," it would seem to me that the queen would have been lonesome there.

The colonies here do fine section-work when shaken on drawn combs, but are somewhat apt to swarm within two weeks. Starters *will* do, if you will keep in mind my directions for securing worker-comb, and use a brood-nest of not more than seven Langstroth frame capacity. *However*, I have no quarrel with those who prefer full sheets of foundation, as excellent results are secured in either way, and I hive these forced swarms on full sheets, when, for any reason, I desire to form such swarms late in the season.

"I would suggest to contract the brood-chamber to three combs, so that the majority of the bees would be compelled to work in the supers." Don't you do it, for pollen will be placed in the sections. I have found it unsafe to contract the brood-nest until a swarm has been hived several days, or they may desert. With a brood-chamber, either shallow or deep, of *five* Langstroth frame capacity, a little pollen may go into the sections, but with a brood-chamber of six or seven Langstroth frame capacity, I have very rarely had this trouble.

"Then, as soon as these three combs are occupied, add one or two more." Here, and in the quotation above, Mr. Getaz says "combs," but, as he said, "It will not do to put in already built comb," I suppose that he means *frames of foundation*. Well, just let me suggest that "this is entirely too much work."

"Shall we leave a comb of brood? No, unless it is sealed brood." I have left combs of brood of all ages, and no swarming out resulted therefrom, although my experience in this respect is very different from that of J. E. Crane and some few others.

"Shall we 'shook' or not? In my opinion, no, decidedly no. It is far better to keep the forces together than to divide." Why, to be sure, but shaking *does not divide* when properly done, unless increase is desired. After shaking, I put a piece of burlap over the topmost super on the forced swarm; on this place the brood-nest and combs of brood, and the cover on top of all. Bore a ½-inch hole in the front end of this brood-body containing the frames of brood, and over this nail a chute or runway, so that as the brood hatches the bees are automatically fed into the "shook" or forced swarm, until all the brood is hatched. Or the same result may be attained by using the Heddon method of preventing after-swarms.

The burlap under the brood-comb gives ventilation and prevents chilling of the combs of brood. By this plan the forces are kept together, avoiding, in my practice, any "double loss," giving a double gain, control of swarming, with comparatively little labor and a large yield of comb honey of fine quality; and the queens are laying almost all the time, which can not be said of Mr. Getaz's plan of unqueening, although unqueening is an excellent plan for localities having one short honey-flow.

This season I have tested several systems of management to be used in the production of comb honey, and, as a result of that experience, I shall in the future use the Aikin method of allowing unlimited breeding-room up to the opening of the flow, then shake on starters or combs of sealed brood, in the latter case, giving only a ripe queen-cell. By giving sufficient stores and breeding-room up to the opening of the flow, it will not be necessary to inspect the bees more than once or twice up to June 1, when, at the opening of the June flow, by shaking *all* we need not inspect brood-nests for several weeks, visiting the bees once in ten days to give more super-room, and to remove finished supers.

Make the swarms very strong at any cost, for the strong colonies are the ones that stack up the supers of No. 1 honey. Ada Co., Idaho, June 30.

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Wetting Qeeens for Easy Handling.

BY ADRIAN GETAZ.

I AM the one to whom Dr. Miller refers in his letter (page 483) as to wetting the queens when introducing them. What I had in view was not the introduction, but rather the handling of queens. The queens that I buy are introduced as per directions printed on the cage-cards. I do not think that any better method can be found, notwithstanding all that has been written on the subject.

I wet the queens whenever I handle them, just for safety and easy handling. For instance, you want to catch a queen for some purpose or other. You find her on a comb with more or less bees around her. Well, you try to catch her. Perhaps in your hurry you mash her or injure her seriously. Or some bee intervenes and stings you. Or, for fear of hurting her, you fail to catch her firmly, and she begins to race around quite lively. In your attempt to catch her, you scare her worse and worse, and she finally takes wing, and then you feel very much like breaking the third commandment of the Decalogue

Now, suppose that as soon as you see the queen you give her and the bees around her a good wetting. Then neither bees nor queen can neither run nor fly—just barely crawl about. You can then take your own time and catch the queen tenderly and carefully, and just put her wherever you please.

In rearing queens, I invariably cage the cells as soon as the bees have thinned the ends. The cages are made of wire-cloth, and similar in shape to the West cages. I put the cage in the hive the queen is to occupy, if it is already queenless, or I leave it where the cell has been built. But it must be in the cluster of bees to make sure that the young queen will be fed. Anyway, the time will come when the queen (a virgin, of course) will have to be released. When I first began, I simply uncorked the cage and laid it on the frames, letting the queen come out and go down between the combs. After two or three went "up in the air" instead of "down between the combs," I decided to give cages and queens a good wetting before uncorking the cages.

During the last two or three years I have often introduced them directly. That is, taken the cage (and enclosed queen) from the colony where she had been reared, given her a bath, and turned her loose at the entrance of her new home. This method has been as successful as the other. It has the advantage of not needing to open the hive where the queen is introduced. That's a good deal in times of scarcity of nectar. Very often the medding of robbers spoils the introduction of a queen. Knox Co., Tenn.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Cutting Out Queen-Cells—Swarming.

Will you please explain about taking out queen-cells?

1. When to commence taking them out?
2. How often?
3. How long after the first swarm to prevent a second? and how long after a second to prevent a third?
3. How to tell if a colony is queenless after swarming, and what is best to do with them? Mrs. S. Hatch.

Washington Co., N. Y.

1. If your desire is to prevent or postpone a first swarm you must begin as soon as queen-cells are started, at least before they are sealed. If you have a number of colonies, begin looking through the strongest at or before the usual time of swarming, which will likely be in your location about the time the white clover begins to bloom. When you find cells started in these strong colonies, then it will be well to make a systematic search in the others.

2. About once in nine or ten days.

3. If all but one cell are cut out about a week after the first swarm, there ought to be no second or third swarm. If you want a second swarm to issue, but nothing later, cut out all cells but one as soon as the second swarm has issued. This, however, is not entirely safe, for immediately upon the issuing of the second swarm another young queen may have issued from her cell, and if you leave one cell uncut while there is a free queen in the hive, there may be a third swarm.

On general principles it may be said that you will probably find upon sufficient experience that it is better to prevent all after-swarms. To do this by cutting out queen-cells, listen for the piping of the first young queen that emerges. That ought to be about eight days after the issuing of the first swarm. To be on the safe side you might begin to listen the seventh day. Go to the hive in the evening when it has become still, put your ear against the side of the hive, and if there is a young queen there piping, you will have no difficulty in recognizing her shrill voice at intervals, "p-e-e-e-p, p-e-e-p, peep," and then the next morning cut out *all* cells.

There is, however, a better way than to cut out cells, by getting the bees themselves to do the job. The bees will never miss a cell; you may. The plan is this: When the first swarm issues, set the swarm on the old stand, putting the old hive close beside it. A week later move the old hive to a new place. That will make the field-bees, on their return from the fields, instead of going back to the old hive go back to the old *place*, joining the swarm. This will so weaken the old colony that the bees will decide they can not afford to swarm any more, and only one queen will be left.

4. Two weeks after the issuing of a first swarm, if no brood nor eggs are to be found in the hive, you may decide you have a queenless colony. Give it a laying queen, or if you have none, a virgin queen or a queen-cell.

Hiving Swarms from Tall Trees.

As Miss Wilson has asked the sisters to tell how they do it, and as Joseph Blake tells how he did it, in last week's Bee Journal, I will tell the sisters the way I did it last summer.

I have a tall, slim red-cedar tree in my yard, and a swarm came out and settled in the top of it. So I spread an old quilt on the ground and put the hive on that, where I supposed they would fall, when I pulled the tree-top over and would shake them off.

I nailed two pieces together, and put a large nail in one end of the pole and tied the other end with a clothes-line, so my neighbor could pull on that while I had the pole. I went after him, and he came; of course, he kept away quite a little distance, as he is afraid of bees. The nail would slip off of the line; I spoke but got no answer, and looked behind me and he was gone. One got after him and he left. I thought if I could get the rope around near the top then I would pull it over. It did not take me long to think how to get it there. I tied the line to the end of the pole and put it up where I wanted the rope, and walked around the trees and pulled the rope along, so it would come down. I then tied both ends together to pull it down.

I had to go for my neighbor again (they live close to me). When he came he wanted to know how I got the rope up there. So we both pulled on the rope and bent the tree-top over so I could shake them off, but the bees did not go near where I expected they would; they took wing and settled in a high cedar, higher than they were before, and the limbs were so thick together that one could not get them. My neighbor thought they were a hopeless case. I said the only way I could see to do with them was to keep them stirred up until they would leave and go some place else. So, with the long pole we kept them stirred up, but they would cluster in the same place, so I told him he might as well go home, and I would keep stirring them up.

I have tall pine trees along the road, and the bees are on the south side of them, so the neighbor just below the other one saw me in the road and came up. He and I kept punching and stirring them. He said we ought to have some kind of smoke, so I left him working at them and came in to get some saltpeter rags to tie on the end of the pole to set fire to and put up among them. When I went back I heard a roaring in the apple-tree by the other one, and I saw they intended to make for the woods, but the queen was too tired. She settled on a low limb of an apple-tree right across the road, so I took the hive over there, and with a poker got them and poured them on the quilt in front of the hive, and they were very glad to march in as fast as they could. It was a prime swarm, and I did not want to lose it. You see, there is a good deal of the bull-dog nature about me to hang on. When I got through I had been over an hour at them, but I got them.

I think the Sisters department a great improvement to the Bee Journal; it gives us a chance to know what each one is doing, as you say, Whenever a woman makes up her mind to do anything she will do it.

I will let you know about my bees before very long.

Cumberland Co., N. J. Mrs. Sarah J. Griffith.

Honey as a Health-Food is the name of a 16-page leaflet (3½x6 inches) which is designed to help increase the demand and sale of honey. The first part is devoted to a consideration of "Honey as Food," written by Dr. C. C. Miller. The last part contains "Honey-Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by every one who has honey for sale. It is almost certain to make good customers for honey. We know, for we are using it ourselves.

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Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.

By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

MENDING THE WEATHER—SHADE-BOARDS.

Mr. Abbott must be allowed his joking question about what we are going to do to mend the weather—warm weather in winter—but that is a very misleading joke. If decided that bees really suffer serious loss from much and daily flying around, the flying can be greatly reduced. The main question is simply whether that much work and expense is called for—and whether our arrangements will not be left to do harm further on, when Winter really gets busy. The key to the situation lies in shade-boards mainly. A complete shade has great power in the winter. Page 421.

THE OCTOPUS OF COMBINATION.

Curious variations, the Octopus is capable of taking on, it seems. The fruit combine of California now walks on two equal legs, one a company of producers and one a company of commission men—the same head and tentacles answering for both. Case of necessity again. Benificent. Curious to see how, in these present years, the benificent whistle of combination is in the boys" pockets, and how it inclines to get to whistling itself. And if boys were saints how good a thing it would be! Page 422.

A SISTER TO TRY HATCHING EGGS OVER BEES.

Now we are to know whether it is practical to hatch eggs over bees. A woman with "gumption" to do things, and who handles both fowls and bees, is going to try it. Page 424.

REMOVING HONEY FOR BROOD.

May be. Must be—seeing good men say it—in Cuba, and perhaps in other places, too, sometimes—But still I feel pretty sure nectar will be taken out of the way of the queen *whenever both queen and workers eagerly want brood.* Instead of studying on some other kind of bee, brethren, can't you put the bee you have in a different frame of mind? Page 428.

VENTILATION OF BEE CELLARS.

Surely, Bingham is strong on ventilation. He gives cellar three tall ventilators, each big enough for a chimney-sweep to crawl in. And when they take the temperature down he inclines to just "let her go down." Yet, popularly, the present drift of sentiment is toward no special ventilation at all. How perplexing! May it not be that these two things I name are *both* truths? With correct and even temperature extra-pure air is not mandatory. With perfectly pure air even temperature is not mandatory. Of course we know that everything is mandatory, and still the bees will die, if the food is bad. Page 428.

SACKED SWARMS THAT DESERTED.

Ah! Nine swarms tied up in sacks because there were no hives for them, all deserted when hived. Worth heeding. Several days sacked. England. In Yankee land we do things better. Guess some would have staid if they had been fed properly. Page 430.

IRONING UNEVEN COMBS.

Thick, uneven combs put into shape by ironing them with a sad-iron not quite melting hot. 'Pears like it might answer. Page 436.

SOLICITING ASSOCIATION MEMBERSHIPS.

Solicitors to get bee-folks to join the Association. I had not thought of that before. Guess it will work—that is, can be made to work—in those regions of country where bee-men "hang thick on the bushes." Page 438.

UNITING WEAK COLONIES IN SPRING.

Yes, Mr. Green, I agreed with you at the time, but thought it well to have reasons more fully stated. Let each weak colony in spring paddle its own canoe the best it ever can paddle it. Help them if you can, but don't muss them up. More and better ones will get through than by continued uniting. Still, we don't want the iron-clad proposition that weak bees are *never* to be united in spring. Page 439.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Best Hive—Gathering Honey.

What is the best kind of hive to use for bees? We have a colony in a box, and I am anxious to get a hive.

When shall I gather the honey, and how?

ILLINOIS.

ANSWER.—You will do well to adopt a movable-frame hive, the dovetailed being one of the most popular. It is now so late that perhaps it will be as well to leave the bees in the box till next season after the first swarm. Very likely, however, they may do more than to fill the box, and you may be able to obtain some nice surplus for the table. Make one or more holes in the top of the hive or box—no matter if you bore right down into the honey—set over this a box four or six inches deep, and large enough to cover the hive, or more than one smaller boxes of the same depth, and when filled remove. You can tell better when filled by having glass on one or more sides, darkening the glass.

If you are going in for bees, one of the first things to do is to get a book of instruction, telling you how to take care of them.

Transferring Bees—Overstocking and Preventing Increase.

1. I wintered two colonies last winter. This spring they each swarmed three times, and one of those swarms swarming again. One (in an old Langstroth hive, the other in a Jones) has filled all of the eight frames and the spaces between, so I can not take out any frames without cutting the comb between and drowning a great many bees. I do not wish to leave this hive in the condition it is. How can I get the bees out of the hive and put them into a new hive, so I can save honey, comb and bees?

2. I have 15 colonies. There are about 60 or 70 other colonies in the village. What number could I safely work up to without the neighborhood being overstocked?

3. When I get to that number, how can I prevent increase?

PALERMO.

ANSWERS.—1. You need have little fear of drowning bees in honey, for the other bees will clean them up. But you can get the bees out by smoking and drumming them, as directed in your bee-book.

2. That depends altogether on the pasturage. It is possible that you have reached the limit already, with 75 or 85 in one locality. Many localities will bear 100 colonies, and some favored places 200, 300, or more.

3. There are various ways, one being to double in the fall or spring to the desired number.

Queenless Colonies—Difference in Bees.

1. I have over 100 colonies of bees. At this time of the year the honey-flow is over, and I find many queenless colonies. I give them brood from other colonies, and still some fail to rear a queen, and finally dwindle away. There are plenty of drones about. Why do they not rear queens?

2. When going through the hive I find in some that many of the supers contain uncapped honey, while others are starving for lack of it. Does uncapped honey in the extracting super prove that the bees are still gathering honey? If so, why is it that while some colonies gathered sufficient to store some, that other colonies failed even to support themselves, both colonies being equally strong?

3. I bought some queens this spring from a breeder as Italian queens. One of them seems different from the others. They are quite a gray color, having a couple of rusty bands.

They are so cross that when the hive is opened they fly out at you as if they were shot out of a gun, stinging one all over. What kind or breed of bees do you think they are? The other Italians are gentle, and have more yellow on them. CALIFORNIA.

ANSWERS.—1. I don't know. Possibly they have been queenless so long that the bees are all old, and old bees are not the best kind for rearing queens. As you have given brood, there will be young bees hatching out from that brood, and if you give them brood and eggs again after enough young bees have hatched out, it is possible they may be willing to start cells.

2. No, unsealed honey in the extracting super does not prove the bees are still gathering. Two colonies apparently equal in strength may vary greatly in industry; one storing while the other scarcely makes a living.

3. Hard to tell; there may be black or Carniolan blood in them.

Keeping Wax-Worms Out of Honey.

I would like to know how to keep the wax-worms out of comb honey. I have a nice lot to ship, and would like it in first-class shape. NEW YORK.

ANSWER.—You ask how to *keep* the wax-worms out. The best way is to have strong colonies with a large proportion of Italian blood in them. You probably, however, want to know how to destroy the worms already in your sections. Fumigate them with sulphur. Use about a pound of sulphur or brimstone for each thousand cubic feet of space. Take any old vessel and fill it partly with ashes. In this set the iron vessel to hold the brimstone. Put in rags, live coals, or a hot iron, and as soon as lighted hustle out so as not to breathe the fumes. Close up tight, and 12 to 24 hours later air out. That will destroy all but the eggs, and you must repeat the fumigation about two weeks later to catch those that hatched out from any eggs that might have been present.

If you can get it, it may be still better to use bisulphide of carbon, which is believed to destroy the eggs as well as the larvæ. The amount to be used depends upon the number of sections and the space. One way is to stack up the supers of sections 5 or 10 feet high, put an empty super on top, and cover up in this two or three tablespoonfuls of the drug in a saucer, leaving it to evaporate. Be sure not to bring a light near it, unless you want your friends to be troubled by a funeral.

The Alfalfa Pest—Number of Colonies for One Man.

1. Please describe the insect that blights alfalfa. How often does it appear in such large quantities? I would like to know all about it.

2. How many bees are the most that one man can handle, where there is a long but slow honey-flow? CALIFORNIA.

ANSWERS.—1. I don't know, and refer the question to some one of the constituency better informed.

2. From 100 to three or four times that number, according to the man and management.

Did the Queen Pass Through Perforated Zinc?

I have just overhauled my five hives. I had queen-excluders on 2 hives. In each case I find brood in the upper chamber. I found the queen in one upper chamber, caught her and put her down below. I suppose in each case the queen must have passed through the perforated zinc. Do you think my supposition correct? Drones cannot pass through them, but I think the queen must have done so, or else I have queens above and below, for there is brood in both places. If there are two queens, then the one I caught and put below will either kill or be killed.

I have not had much swarming, and no great amount of honey. The bees are working, but I think the brood eats it all. There is lots of brood. BRITISH COLUMBIA.

ANSWER.—It is just possible that the case may be explained by assuming that the queen went up through the excluder, but I would accept that explanation only as a last resort. A virgin queen will make frantic efforts to get through an excluder when she wants to go out on her wedding-trip, but I have never known that a laying queen would try very hard to get through an excluder. Even if the perforations were just large enough for such a queen to squeeze through, I don't believe one queen in a hundred would make the effort. Still, if there is no possibility of a queen in each story, or of brood having been put in each story, it is just possible that there may have been perforations large enough, and that the queen passed through.

Time to Rear a Queen—A Colony Killing Its Bees.

1. I divided 11 colonies this summer. I put the old queens on the old stands, and the new ones off by themselves. Now what I want to know is this: The "A B C of Bee-Culture" says that it takes 24 days for a queen to hatch, but 9 out of that 11 hatched in 12 days, and one of them swarmed. There were no queens in there when I divided them.

2. I have a colony of bees that kill many of their bees; they have done it two or three times this summer. They will kill about a pint and then stop for awhile. One colony did it last year, and I thought at first that another swarm had gone in, but I see that is not what is the matter with them. COLORADO.

ANSWERS.—1. You must have misread the "A B C of Bee-Culture." I think no authority nowadays makes the time longer than 16 days from the time the egg is laid till the young queen emerges from the cell, and 15 days is perhaps nearer the truth in a strong colony. When the queen is removed, as in your case, queen-cells are started from young larvæ, and the first young queen generally emerges in about 12 days, so your bees followed the general rule.

2. I don't know what the trouble is that would make them kill off anything but drones. It might be, as you supposed, a small swarm entering, only it would hardly occur so often.

Buying and Rearing Queens.

Would you advise buying a queen now, or wait until spring? I want to try rearing a few queens, and did not know whether to get a queen now or wait until spring, when it is not so warm for her to be sent through the mail. MISSOURI.

ANSWER.—Better get the queen now. If you wait till next year it will be somewhat along in the season before the new queen gets settled in her place, and if you get her this year you can begin breeding from her as early as you like next year. In other words, you will be just so much farther on by getting her this year; perhaps even being able to rear some queens from her this year.

Using the Drone-Trap—Introducing-Cages.

1. How can I trap drones without injuring the queen or her usefulness?

2. Does the old queen always issue with the first swarm of the season?

3. Will she at no time come out unless a swarm issues?

4. Can non-swarming be practiced by the use of the drone-trap without injury to the queen?

5. When the queens destroy one another, does the old queen always come out victorious?

6. What cages are the best for introducing queens? and what kind of candy is used in them?

7. Is it an established fact that the queen has to come out of the hive to be fertilized?

8. How can I successfully practice non-swarming with the use of the drone-trap, and destroy the surplus of drones at the same time and not injure the queen or her usefulness? OHIO.

ANSWERS.—1. By using the Alley drone-trap.
2. Yes, unless some accident occurs to her.
3. Not after she has taken her bridal-trip.
4. Not satisfactorily.
5. No.
6. Merely for introducing without shipping, the Miller cage with Scholz or Good candy.
7. Yes.
8. I don't know.

You are quite right as to the importance of studying one's business, and you would find it a very great help to study a good bee-book.

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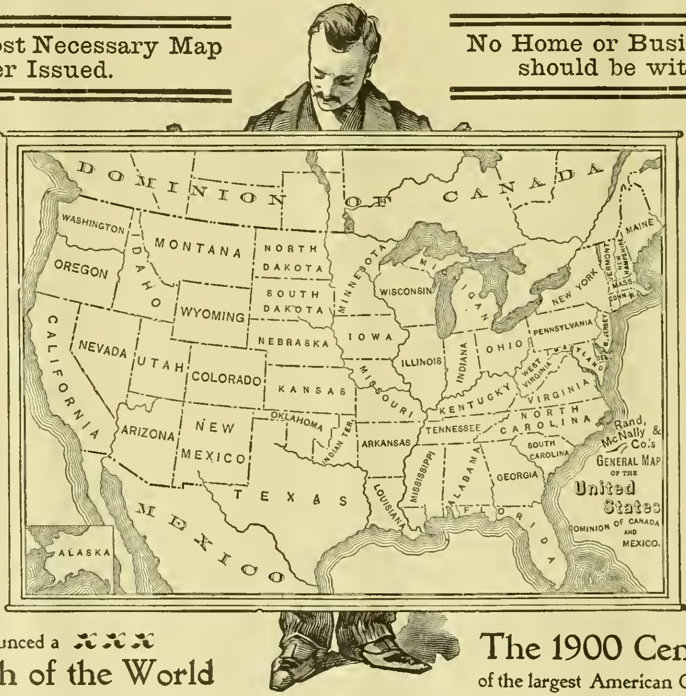
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FROM MANY FIELDS

Fine Weather in California.

We are having fine weather here in central California. Bees are doing well. The Central California Bee-Keepers' Association had a special meeting to discuss and consider the subject of the California National Honey-Producers' Association of Los Angeles. Nearly all were in favor of joining, but it was laid over until after the meeting in Aug. 18 to 20, at Los Angeles, where some of us expect to be, if the Lord wills.

My folks live at Pasadena, the garden of Los Angeles County, which place the Santa Fe railroad runs through. Bee-keepers from the East should not fail to see it while in California.
B. P. SHIRK.

Kings Co., Calif., Aug. 3.

Hiving Swarms—A Report.

I received a queen during that cold, wet weather and had bad luck introducing her, so I sent for another and introduced her with the tobacco-smoke system, and had success.

On page 473, dumping the swarms in front of the hive and letting them run in to keep them strong is recommended. It says in two weeks all swarming will be over. It seems to me a

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long time to dump swarms in front of a hive. Now I will give my way, which works like a charm.

Take an empty hive, set it in front of the parent colony, and put an Alley queen-trap in front. Have a screen made of wire-cloth to fit the top of the hive. Dump the bees in the hive, put the screen on quick, and smoke them out through the trap. The bees will return to the parent hive; take off the trap, and you have all queens and drones at your disposal.

I started in with 18 colonies, spring count, and I now have 35, all in good condition. I have taken off about 500 pounds of clover honey so far. The first part of the season being too cold and wet, the bees only made a living, and got ready for furious swarming. At this time it is getting very dry, and the bees are almost on a strike.

I would like to attend that convention, but the distance is so great that it would spoil a $100 bill for me to go, so I will have to stay at home and see what the "Old Reliable" will say about the convention.

The Sisters department is fine. Success to Miss Wilson and the American Bee Journal.

F. McBride.

Hardin Co., Ohio, July 17.

Will Exhibit at St. Louis in 1904.

The bees did well until July 18, then the honey-flow was cut short, the nights being cool and the days warm, and very little honey coming in. Up to July 18 the flow was good, never better. I will send one ton of honey to the St. Louis Exposition in 1904.

I have 43 members for the National Bee-Keepers' Association. I sent in 32, and have 11 more to send in yet—43 from one county, and I still expect more.

I increased 1 colony of bees to 4 this season, and had taken from them 363 pounds of honey up to July 21.

G. W. Vangundy.

Uintah Co., Utah, Aug. 4.

Gathering from Alfalfa in Wisconsin.

Bees have not been doing much in the way of storing surplus honey for two weeks past. Before they were doing well on alfalfa clover until that was cut. There is plenty of white clover, but it does not yield honey like alfalfa. On one side of the bee-yard is alfalfa and the other is white clover.

Last fall I put in the cellar 78 colonies, and did not lose one in wintering. I now have 102 colonies and 8 nuclei. I work my bees for section honey. They are the 5-banded Italians.

A. McClanathan.

Eau Claire Co., Wis., July 28.

About Half A Crop of Honey.

About half a crop of honey is reported for our locality; west of Chatsworth it was a little better than most localities. Six hundred colonies, belonging to four bee-keepers, produced nearly 40 tons. Had the bees all been Italians, and in Langstroth hives, there is no doubt but what the crop would have been much better.

The most of our honey crop came in June, it being cold and foggy during the month of May.

As usual, the hot weather hurt the white sage in July.

I saw something in the American Bee Jour-

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We are not selling goods on NAME ONLY, but on their quality.
In addition to the many car-loads we are shipping to all parts of the United States, we have just made one shipment of five car-loads to England.
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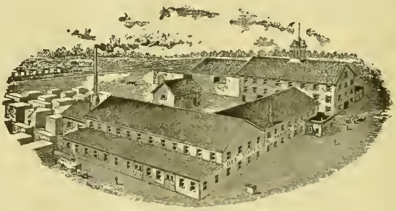

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This is a true story of the poor and unfortunate in city life. Miss Horton, the author, is a deaconess whose experiences among the city poverty stricken are both interesting and sad. This particular short story—60 pages, 5x6¾ inches, bound in paper cover—gives somewhat of an insight into a little of the hard lot of the poor. Price, postpaid, only 10 cents (stamps or silver.) Address,
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nal about sumac being a good honey-flower. The kind of sumac that grows on the dry hills of this section yields a little honey in July, and it is of a dark color. It is quite different from that which grows in the lowlands of Minnesota.

My father sells honey at one of the city markets at half a cent higher than that quoted by the California National Honey-Producers' Association. Of course, only merchants buying a few cases will buy. He also retails extracted honey.

No doubt the California National Honey-Producers' Association is all right for Eastern buyers, but honey may come up a little after the 15th of this month. E. ARCHIBALD.

Los Angeles Co., Calif., Aug. 7.

A Short Report.

I have 38 colonies of bees, and doing well. I have taken off 800 pounds of honey, and have 1500 more in sight. JOHN DEGROFF.

Peoria Co., Ill., Aug. 10.

Beedom Boiled Down

Translated from the French.

INTRODUCING BEES.—Mr. Fitzhoff, (Journal de l' Abeille rhenane), says he put the caged queen in the hive. Next day, he takes the cage (queen included) puts it in a cup of cold water and then turns the wet queens loose. He says he has never lost a queen, even when introducing to colonies with laying workers. Though he does not say so, I suppose that the queen is alone in the cage, without candy or attendants.

APIFUGE SUPER-CLEARER.—In a quart of boiling water put one ounce of carbolic acid (crystals) and one ounce of glycerine. When needed, wet a cloth with the mixture and put on the supers to be cleared. A few minutes will empty them of all the bees.

DO BEES MOVE EGGS?—Mr. Gallet (Apiculteur) says yes. In July, 1889, he introduced a queen in a wire-cloth cage without attendants and without food (the usual process in Europe) to a colony having no unsealed brood. Some accident prevented him from releasing the queen until four days later. To his surprise, he found eggs in several of the cells around the cage. He supposes the queen dropped her eggs which fell through the meshes of the wire-cloth, and were carried by the bees into the cells.

PARAFFINE AND WAX.—The adulteration of wax with paraffine is not often practiced here, but it may be well to know how to ascertain the fact.

Heat the suspected wax in a porcelain vessel with a large quantity of concentrated sulphuric acid. There will be a considerable foaming. Keep the heat a few moments yet and let cool. The wax will be transformed into a semi-liquid black residue; while the paraffine will remain intact, come on the top solidify. The acid must be as concentrated as possible, otherwise it would act only very slowly and imperfectly on the wax. It must be in excess, otherwise the residue would be too thick and retain the paraffine. A portion of the paraffine remains in the residue even then. A mixture of 50 percent of paraffine gave only 45 at the end, and a mixture of 75 percent only 68. (From Le Rucher Belge.)—ADRIAN GETAZ, in American Bee-Keeper.

Italian Queens, by Mail.
Golden and Honey Queens.

July and August.	1	6	12
Honey Queens (Untested)..	$ .75	$ 4.00	$ 7.00
" " (Tested)....	1.25	7.00	13.00
Golden " (Untested)..	.75	4.00	7.00
" " (Tested)....	1.25	7.00	13 00
2-frame Nucleus (no queen)	2.00	11.00	21.00

Breeders, $3.00 each, after June 1.

Add price of any Queen wanted with Nucleus. Our bees are shipped in light shipping-cases. Purchaser pays express on Nuclei. Safe arrival guaranteed of all stock sent out.

OCONOMOWOC, WIS., Aug. 1, 1903.
I like your queens. The best of any that I ever had. Respectfully yours,
FRANK D. GUNDERSON.

LITCHFIELD, ILL., Aug. 3, 1903.
DEAR SIR:—Enclosed please find money order for $1.50 for which send me two untested honey-queens. The one I bought of you two years ago is all right. There are no better.
Respectfully yours,
GUS PICAMAN.

Notice. — No tested stock sent out before May 15. Send money by P. O. Money Order or Express Order. D. J. BLOCHER,
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Bee-Stings for Rheumatism.

Dr. Perc, of Marburg, addressed a brilliant gathering of physicians the other day on the healing properties of bee-stings in cases of rheumatism of the joints and muscles. The professor pointed out that it has been known from time immemorial as a cure among the poorer classes of people who have no faith in medical science. He has tested it thoroughly and proved its efficiency in 500 cases.

If a patient is suffering with rheumatism the stung part does not swell at first, nor until the bee-poison is frequently introduced. Then the rheumatic pain gradually vanishes. Dr. Perc allows his patients to be stung at first by a few bees, and then gradually increases in numbers. In one sitting he allows 70 bees to sting the patient. He describes the case of a woman who suffered excruciating tortures from rheumatism. In the course of her cure she was stung 6,952 times, and this resulted in a complete cure.—Exchange, Berlin, May 24.

Pervention of Swarming.

An ordinary bee-keeper that has been in the business for a number of years will tell you that when a colony gets to a certain strength, that is, after the white clover has been in blossom some 12 or 14 days, every colony that was in good condition will have one super half to three-fourths full. But now comes the critical condition. After said super is nearly full, the colony will begin to loaf for a week before it swarms, and this same week is lost if we wait for a natural swarm; henceforth be wise and transfer when the super is half full.

Some apiarists will tell you that every colony will act different from others. Nonsense. The bees must be controlled and made to do that which you wish, *a la* Aikin. Providing you have bees, and there is any nectar in the field, "shook" swarms will work with the same vim as the natural swarm, and doubling that of a loafing old colony with a lot of worthless brood after the flow is over.

My method is as follows: The colonies are grouped in pairs to begin with in the spring. Colonies No. 1 and No. 2 stand side by side. Spread them about 18 inches, and place a bottom-board with a Heddon half-super or hive betweem the two hives, and place in it seven shallow frames with one-half inch starters.

Now go to colony No. 1 and pry off the super, but do not take the cover off the super. Use very little smoke; next find the queen and place her with the frame of brood she is on, in the newly formed hive, with three of the empty frames on one side and four on the other. Now take from the same colony two more frames that contain no brood and place one on each side of the empty frames, and the brood-chamber is complete. Place an empty super, containing only starters in the sections, on this newly formed colony. Take the cover off the other super and place the super on the empty super, and the super from colony No. 2 on top of these two supers. Now cover the newly formed hive with a thin board with a 3/8 inch rim to make it look like an escape-board, *a la* Porter. Cut an entrance in this escape-board by cutting two inches out of the rim in the front end. Now bore an inch hole through the board, one inch from the two-inch rim entrance.

Kill the queen from colony No. 2 and set the colony on this board, bottom-board removed, and also the body with the brood and bees from colony No. 1 on top of this, cover up and you are finished. You will now have shot-tower hives, *a la* France. Work is now going on in the supers in double time; hip, hip, and the colony is gaining in strength daily.

Fifteen days later, in transferring, the two brood-stories should be taken off and placed beside the parent colony. Eight days later reduce down to 20 frames, give them a strip of eggs, *a la* Alley, and you will have a number of queens 25 percent superior to those reared under the swarming impulse.

Two weeks after the eggs are given, kill the queen in the old colony, give half of the brood to the parent colony that has the capped cells, and, at the same time give the old colony two cells from this parent colony, protected, *a la* West. You will now have your whole apiary requeened, which is very essential in the "shook" swarm system.—GEO. ROCKENBACH, in Progressive Bee-Keeper.

The Canadian Honey Harvest.

The white honey harvest is well-nigh over, and so far as we have been able to ascertain the crop will be a good average. Quebec and Eastern Ontario suffered for lack of rain in the early part of the season, and, as a result, only a light crop has been secured. Western and Southern Ontario have had a good yield from clover. Basswood is doing fairly well at this date of writing, although the unsettled weather is rather against the bees working on it to the best advantage. We have not yet heard from the Western and Maritime Provinces. The quality of the honey this season is excellent, both in color and body. Many have mentioned the fact of the thickness, making it unusually difficult to extract.

Some have feared a lowering of prices, but we see no necessity for this if an effort is made on the part of the larger producers to distribute the product. Some have already sold at figures bordering on last year's prices. The general advance in other things should certainly have an influence in at least maintaining prices. Local markets are usually crowded by small producers at this season, and the tendency is depressing. It is generally better to hold a little later.—Canadian Bee Journal.

Excessive Swarming in Colorado.

It seems that excessive swarming this year is not confined to a very small area. In Illinois it is perhaps worse than in any previous year, and this is what is said about it in Colorado, by the Rocky Mountain Bee Journal:

"Usually bees do not swarm much in Colorado, normally casting not to exceed 40 percent of prime swarms, with a still smaller percentage of after-swarms. This year, however, has pulverized all previous records. Swarming began about May 20, and did not cease until after July 15. And just about everything swarmed. One subscriber, in renewing, facetiously remarked that, in his locality, 'even the drones swarmed.' This is the tenor of reports we are receiving from nearly all localities of the State.

"This season was a peculiar one. The flow began slow and drizzling—just strong enough to maintain active brood-rearing, but not strong enough to settle the colonies down to gathering and storing in the supers. The result has been a very large increase of bees throughout the State. The heavy winter loss is recovered, and we believe it no exaggeration to say that there are more colonies of bees in Colorado to-day than ever before in her history."

Long Tongues Valuable
South as well as North.

How Moore's strain of Italians roll in the honey down in Texas.

HUTTO, TEX., Nov. 19, 1902.

J. P. MOORE.—Dear Sir:—I wish to write you in regard to queens purchased of you. I could have written sooner, but I wanted to test them thoroughly and see if they had those remarkable qualities of a three-banded Italian bee. I must confess to you I am more surprised every day as I watch them. They simply "roll the honey in." It seems that they get honey where others are idle or trying to rob; and for gentleness of handling, I have never seen the like. Friend E. R. Root was right when he said your bees have the longest tongues; for they get honey where others fail. I will express my thanks for such queens. I am more than pleased. I will stock my out-apiaries next spring with your queens.

Yours truly, HENRY SCHMIDT.

The above is pretty strong evidence that red clover is not the only plant which requires long-tongue bees to secure the greatest quantity of nectar.

Daughters of my 23-100 breeder, the prize-winner, and other choice breeders: Untested, 75 cents each; six, $4 00; dozen, $7.50. Select untested, $1.00 each; six, $5.00; dozen, $9.00. Safe arrival and satisfaction guaranteed. Circular free. I am filling all orders by return mail, and shall probably be able to do so till the close of the season.

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	5lb	10lb	25lb	50lb
Sweet Clover (white)....	$ .75	$1.40	$3.25	$6.00
Sweet Clover (yellow)....	.90	1.70	4.00	7.50
Alsike Clover	1.00	1.80	4.25	8.00
White Clover	1.50	2.80	6.50	12.50
Alfalfa Clover	1.00	1.80	4.25	8.00

Prices subject to market changes.

Single pound 5 cents more than the 5-pound rate, and 10 cents extra for postage and sack.

Add 25 cents to your order, for cartage, if wanted by freight, or 10 cents per pound if wanted by mail.

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Across the Mediterranean.

A bee-keeper of Italy migrated with his 300 colonies across the Mediterranean Sea to Tunis, but failed to make a success of bee-keeping and producing honey. He succeeded, however, in selling out to the French Bee-Keepers' Association there and came home a richer man.—American Bee-Keeper.

Germany and Bee-Keeping.

The German government is looking into the matter of bee-keeping and adulteration of honey at the present time. A government experiment station with 10 colonies of bees has been established near Berlin, and a bulletin has been issued of late, treating principally upon the adulteration of honey; it also tells of the number of colonies kept in Germany, etc. It appears there were kept in 1900, 2,605,350 colonies. Of these 1,151,771 were in frame hives and yielded 16,171,200 pounds of honey; the others—box-hives, straw-skeps, etc.—gave a yield of 13,729,000 pounds. The frame-hive colonies yielded three pounds to two of the others.—American Bee-Keeper.

Packages for Bulk Comb Honey.

The packages used in putting up this article are now most largely 3, 6, and 12 pound tin friction-top pails, that are put up in crates holding 10 of the 12-pound cans, 10 of the 6-pound cans, and 20 of the 3-pound cans. There is also some demand for bulk comb in 60-pound cans, two in a case, the cans having 8-inch screw-tops. These are sometimes ordered where the buyer desires to put the honey into glass packages for a fancy trade.—H. H. HYDE, in Progressive Bee-Keeper.

Brushed Swarms.

So much has been written in regard to brushed swarms, I determined to try the process without combs and use frames with starters or full sheets of wired foundation, and add a Doolittle feeder with three pounds of extracted honey. I place an empty hive in rear of a strong colony, removing the combs one by one, and brushing all the bees from them back into the old hive, and place the combs in the empty hive. Then remove the hives with brushed bees and feeder to another stand, and place the hive with combs of honey and brood in place of the old hive just removed. The returning bees with capped brood soon hatch out another queen, and the feeding of extracted honey enables the bees to build up combs rapidly and prevents a disposition to abscond. It would be a great advantage to introduce a young queen if you have one, but I am experimenting without. I have tried the plan on quite a number, and so

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Bee-Keeper's Guide, or Manual of the Apiary, by Prof. A. J. Cook, of Pomona College, California. This book is not only instructive and helpful as a guide in bee-keeping, but is interesting and thoroughly practical and scientific. It contains a full delineation of the anatomy and physiology of bees. 544 pages. 295 illustrations. Bound in cloth. 19th thousand. Price, $1.20.

Langstroth on the Honey-Bee, revised by Dadant.—This classic in bee-culture has been entirely re-written, and is fully illustrated. It treats of everything relating to bees and bee-keeping. No apiarian library is complete without this standard work by Rev. L. L. Langstroth—the Father of American Bee-Culture. It has 520 pages, bound in cloth. Price, $1.20.

A B C of Bee-Culture, by A. I. & E. R. Root.—A cyclopedia of over 500 pages, describing everything pertaining to the care of the honey-bees. Contains about 400 engravings. It was written especially for beginners. Bound in cloth. Price, $1.20

Scientific Queen-Rearing, as Practically Applied, by G. M. Doolittle.—A method by which the very best of queen-bees are reared in perfect accord with Nature's way. Bound in cloth and illustrated. Price, $1.00; in leatherette binding, 60 cents.

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Advanced Bee-Culture, Its Methods and Management, by W. Z. Hutchinson.—The author of this work is a practical and entertaining writer. You should read his book; 90 pages; bound in paper, and illustrated. Price, 50 cents.

Bienen-Kultur, by Thomas G. Newman.—This is a German translation of the principal portion of the book called "Bees and Honey." 100-page pamphlet. Price, 25 cents.

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far have succeeded, and no absconding has occurred.—DR. O. M. BLANTON, in American Bee-Keeper.

Close Saturdays a 1 p.m.—Our customers and friends will kindly remember that beginning with July 1, for three months we will close our office and bee-supply store at 1 p.m. on Saturdays. This is our usual custom. Nearly all other firms here begin the Saturday afternoon closing with May 1st, but we keep open two months later on account of the local bee-keepers who find it more convenient to call Saturday afternoons for bee-supplies.

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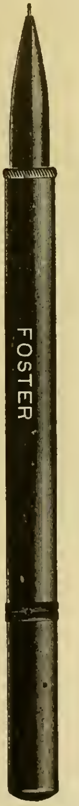

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They hold sufficient ink to write 10,000 words, and **do not leak or blot.**

As they make a line of **uniform width** at all times they are **unequaled for ruling purposes.**

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HONEY AND BEESWAX

MARKET QUOTATIONS

CHICAGO, Aug 7.—Consignments of the new crop are coming to commission houses that have not had honey for years past, and as there is not any consumptive demand they are finding difficulty in disposing of it. Under such conditions it is hardly possible to give accurate prices, as some merchants ask 10 cents for honey that others hold at 15 cents. The prices given in our last quotations are asked, but feeling is unsettled. Beeswax steady at 30c.
R. A. BURNETT & CO.

KANSAS CITY, July 28—Some new comb honey in market, but on account of hot weather the demand is not heavy, but will be getting better every day. Fancy white comb, 24 sections, per case, $3.50; No. 1, white and amber, 24 sections, per case, $3 25; No. 2, white and amber, 24 sections, per case, $3.00. Extracted, white, per pound, 6@6½c; amber, 5½c. Beeswax, good demand, 25@30c. C. C. CLEMONS & CO.

ALBANY, N. Y., July 18—We are receiving some shipments of new comb honey, mostly from the South; the demand light as yet; we are holding at 15@16c. Extracted slow at 6@7c. The crop of honey in this vicinity is very light, and we shall have to depend upon other sections more than ever for our supply of honey. Beeswax, 30@32c. H. R. WRIGHT.

CINCINNATI, Aug. 6—The supply about equals the demand for extracted honey. We are selling amber extracted in barrels from 5½@6½c, according to quality. White clover, barrels and cans, 7@8½c, respectively. Comb honey, fancy, in no drip shipping cases, 16@16½ cents. Beeswax, 30c. THE FRED W. MUTH CO.

NEW YORK, July 8.—Some new crop comb honey now arriving from Florida and the South, and fancy stock is in fair demand at 14c per pound, and 12@13c for No. 1, with no demand whatever for dark grades.

The market on extracted honey is in a very unsettled condition, with prices ranging from 5@5½c for light amber, 5½@6½c for white. and the common Southern at from 50@55c per gallon. Beeswax steady at from 30@31c.
HILDRETH & SEGELKEN.

CINCINNATI, Aug. 8.—New honey is now offered very freely, particularly extracted. The demand for honey is about as usual at this time of the season. I made sales at the following figures: Amber, 5@5½c; water-white alfalfa, 6½c; fancy white clover honey. 7@7½c. Comb honey, fancy water-white, brings from 14@15c. Beeswax, 27@30c. C. H. W. WEBER.

SAN FRANCISCO, July 22.—White comb honey, 11½@13½c; amber, 8@10c. Extracted, white, 5¼@5 c; light amber, 4¾@5c; amber, 4¼@4½c; dark, 3¾@4¼c. Beeswax, good to choice, light, 27½@29c; dark, 25@26c.

This season's crop is not only unusually late, but is proving much lighter than was generally expected. While the market is unfavorable to buyers, the demand at extreme current rates is not brisk and is mainly on local account.

WANTED! FANCY COMB HONEY

In no-drip shipping-cases. Also Amber Extracted in barrels or cans. Quote your best price delivered Cincinnati. The Fred W. Muth Co.
32Atf Front and Walnut, CINCINNATI, OHIO.

WANTED—Comb Honey in quantity lots. We are perhaps the only dealers in this article owning as much as 150,000 pounds at one time. Please state quantity, quality and price asked for your offerings. Thos. C. Stanley & Son.
24Atf MANZANOLA, COLO., or FAIRFIELD, ILL.

WANTED—Extracted Honey.

Mail sample and state lowest price delivered Cincinnati. Will buy FANCY WHITE COMB HONEY, any quantity, but must be put up in no-drip shipping-cases.

C. H. W. WEBER,
2146-48 Central Ave., CINCINNATI, OHIO.
24Atf Please mention the Bee Journal.

WANTED!

TO BUY—White Clover Comb and Extracted HONEY—also Beeswax Spot cash. Address at once, C. M. SCOTT & CO.
33Atf 1004 E. WASH. ST., INDIANAPOLIS, IND

Please mention Bee Journal when writing

The Best Bee-Goods in the World....

are no better than those we make, and the chances are that they are not so good. If you buy of us **you will not be disappointed. We are undersold by no one.** Send for new catalog and price-list and free copy of THE AMERICAN BEE-KEEPER; in its thirteenth year; 50 cents a year; especially for beginners.

—THE—

W. T. Falconer Mfg. Co.,
JAMESTOWN, N. Y.

W. M. GERRISH, Epping, N.H., carries a full line of our goods at catalog prices. Order of him and save the freight.

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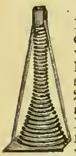
Queen-Clipping Device Free!



The MONETTE Queen-Clipping Device is a fine thing for use in catching and clipping Queens' wings. It is used by many bee-keepers. Full printed directions sent with each one. We mail it for 25 cents; or will send it **FREE** as a premium for sending us **One New** subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device. Address,

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—IN—
SOUTHERN LANDS.

Such investments are not speculative. The South is not a new country. Market and shipping facilities are adequate and first-class. The climate is mild and favorable. Notwithstanding these and other advantages, Southern lands are selling for prices far below their real value, and at present prices net large returns on the investment. For a free set of circulars, Nos. 1 to 10, inclusive, concerning the possibilities of lands in Kentucky, West Tennessee, Mississippi and Louisiana, on and near the Illinois Central Railroad, for homeseekers and investors, address the undersigned,

A. H. HANSON, G. P. A., Chicago.
26A12t Please mention the Bee Journal.

I ARISE

To say to the readers of the BEE JOURNAL that

DOOLITTLE...

is now up with orders, so he can send Queens from his choice honey-gathering stock, by return mail, at the following prices:

1 Untested Queen ..	$1.00
3 Untested Queens..	2.25
1 Tested Queen	1.25
3 Tested Queens....	3.00
1 select tested queen	1.50
3 " " Queens	4.00
Extra selected breeding, the **very best**..	5.00

Circular free, giving particulars regarding each class of Queens, conditions, etc. Address,

G. M. DOOLITTLE,
29Dtf **Borodino, Onondaga Co., N. Y.**
Please mention Bee Journal when writing

26th Year **Dadant's Foundation** 26th Year

We guarantee Satisfaction. What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS. PATENT WEED-PROCESS SHEETING.

Why does it sell so well? Because it has always given better satisfaction than any other. Because in 25 years there have not been any complaints, but thousands of compliments.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

Bee-Keepers' Supplies OF ALL KINDS *****

Very fine pure-bred **BARRED PLYMOUTH ROCK** Chickens and Eggs for sale **at very low prices.**

Langstroth on the Honey-Bee—Revised,
The classic in Bee-Culture—Price, $1.20, by mail.

BEESWAX WANTED at all times.

DADANT & SON,
Hamilton, Hancock Co., Ill

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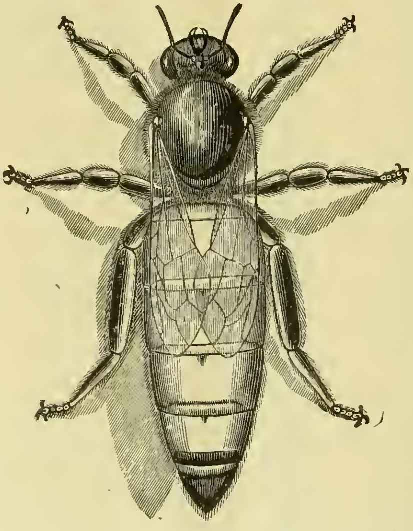
RED CLOVER HONEY-QUEENS.



SPRING BLUFF, WIS., July 18, 1903.
THE A. I. ROOT CO., Medina, Ohio.

Dear Sirs:—I thought I would write you a few lines in regard to the Red Clover Queen I got from you. They haven't swarmed yet this summer, but I have taken 48 sections from them and there is 24 more all ready to come off.

Just think, 72 nice sections of as nice honey as ever was made, and only July 18th. It seems as though they will surely fill 48 more.

I don't know whether their tongues are any longer than any of the others, or whether they gathered it from Red Clover, but surely such bees are worth money.

I use the 8-frame Jumbo frame.

C. E. KELLOGG.

C. E KELLOGG, Spring Bluff, Wis.

Dear Sir —We have yours of July 18th and would be glad to have you advise us by return mail with reference to the capping of the honey. Some parties say the capping from these bees is not white, and we would be glad to have you advise us how your honey is in this respect, and oblige, Yours truly,

THE A. I. ROOT CO.

SPRING BLUFF, WIS., July 31, 1903.
THE A. I. ROOT CO., Medina, Ohio.

Dear Sirs:—Yours of July 24th at hand to-day. In regard to your question in reference to the cappings of the honey from these bees I will say that it is simply perfect, beautiful snow-white and every box perfect. 96 one-pound sections now. I am quite sure they will fill two more supers, which will bring the number up to 144. I would like very much to have you see a few of those sections, and I will be glad to send you a few.

Now, I haven't told you ALL their good qualities yet. I am sure they are by far the most gentle bees to handle I have. I could take off the sections without smoke or veil without getting stung.

There are a few traits about them that seem to me are quite remarkable aside from their honey-gathering; they don't seem to want to swarm.

I will write you again in a few weeks and let you know if they fill the 144 sections, which I am sure they will.

Respectfully, C. E. KELLOGG.

AGAIN READY FOR PROMPT DELIVERY.

We were snowed under with orders for a few weeks, but here we are again with good Queens and prompt service.

Red Clover and Honey Queens.

	Each.	Six.
Untested	$1.00	$ 5.70
Tested	2.00	11.40
Select Tested	3.00	17.10

	Each.
Breeding	$ 5.00
Select Breeding	7.50
Extra Select Breeding	10.00

With any of the last three we include one frame of bees and brood to insure safe arrival, for which we make no charge. These must be sent by express. Queen circular free.

THE A. I. ROOT CO., Medina, Ohio.

AMERICAN BEE JOURNAL

43d Year. CHICAGO, ILL., SEPT. 3, 1903. No. 36.

WEEKLY

JAMES U. HARRIS,
President-elect of the National Bee-Keepers' Association.

THE AMERICAN BEE JOURNAL

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DEPT. EDITORS,
Dr. C. C. Miller, E. E. Hasty, Emma M. Wilson

IMPORTANT NOTICES.

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The Wrapper-Label Date of this paper indicates the end of the month to which your subscription is paid. For instance, "dec03" on your label shows that it is paid to the end of December, 1903.

Subscription Receipts.—We do not send a receipt for money sent us to pay subscription, but change the date on your wrapper-label, which shows you that the money has been received and credited.

Advertising Rates will be given upon application.

National Bee-Keepers' Association

Objects of the Association:

1st.—To promote the interests of its members.
2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

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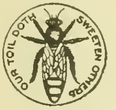
A Celluloid Queen-Button is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-lapel. It often serves to introduce the subject of honey, and frequently leads to a sale.


OUR TOIL DOTH SWEETEN OTHERS

The picture shown herewith is a reproduction of a motto queen-button that we are furnishing to bee-keepers. It has a pin on the underside to fasten it. Price, by mail, 6 cents; two for 10c; or 6 for 25 cents. Send all orders to the office of the American Bee Journal.

200 Nuclei with Red Clover Italian Queens

Ready for Immediate Delivery.

We have arranged with a bee-keeper having a large apiary adjoining Chicago, to furnish us with Nuclei, each having a Red Clover Queen reared from one of Root's specially selected Red Clover Breeding Queens. They will be shipped direct from the apiary at these prices, cash with the order:

One 3-frame Nucleus with queen, $3.50; 5 or more at $3.00 each—on standard Langstroth frames in light shipping-boxes.

Or, we can furnish these Nuclei in 8-frame hives containing 3 extra brood-combs and 2 extra frames with foundation starters, at these prices:

One Nucleus for $4.50; or 5 at $4.00 each.

With a good fall honey-flow these Nuclei can easily be built up into good, strong colonies for wintering.

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Dr. Miller's New Book

SENT BY RETURN MAIL.

The book contains 328 pages, is bound in handsome cloth, with gold letters and design; it is printed on best book-paper, and illustrated with over 100 beautiful original half-tone pictures, taken by Dr. Miller himself. It is unique in this regard.

The first few pages of the new book are devoted to an interesting biographical sketch of Dr. Miller, telling how he happened to get into bee-keeping. Seventeen years ago he wrote a small book, called "A Year Among the Bees," but that little work has been out of print for a number of years. While some of the matter used in the former book is found in the new one, it all reads like a good new story of successful bee-keeping by one of the masters, and shows in minutest detail just how Dr. Miller does things with bees.

HOW TO GET A COPY OF DR. MILLER'S "FORTY YEARS AMONG THE BEES."

The price of this new book is $1.00, post-paid; or, if taken with the WEEKLY **American Bee Journal** for one year, BOTH will be sent for $1.75.

Or, any present regular subscriber to the American Bee Journal whose subscription is paid in advance, can have a copy of Dr. Miller's new book *free as a premium* for sending us **Two New Subscribers** to the Bee Journal for one year with $2.00. This is a magnificent offer, and should be taken advantage of at once. For many of our readers it is not only an easy way to earn a copy of the book, but at the same time they will be helping to extend the subscription list of the old American Bee Journal, and thus aiding also in spreading the best kind of apicultural information among those who would be successful bee-keepers.

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AMERICAN BEE JOURNAL
ESTABLISHT IN 1861
THE OLDEST BEE-PAPER IN AMERICA

43d YEAR. CHICAGO, ILL., SEPT. 3, 1903. No. 36.

Editorial Comments

The Los Angeles Convention is now history. It was a large meeting of large bee-keepers. There were more colonies of bees represented, and more pounds of honey, than in any National convention of bee-keepers ever held before in this country. The following were elected as officers for 1904:

President—James U. Harris, of Colorado.
Vice-President—C. P. Dadant, of Illinois.
Secretary—Geo. W. Brodbeck, of California.

We expect to begin the publication of the report of the proceedings in full next week, and from time to time we will also give some notes and comments on the trip and the convention.

How to Write Questions.—An editorial in Gleanings in Bee-Culture gives rise to the suspicion that the urbane and usually patient editor of that paper has had his patience somewhat tried by the sort of letters he gets containing questions. He says in part:

> "Now, I have something to do besides answering letters; but I am perfectly willing to respond to all inquiries. But our friends will save me a great deal of time if they will make their questions brief, write on only *one side* of the sheet, and number the pages. Long letters are apt to be delayed, and perhaps never answered. It takes time and brains to dig a question or two out of a long, rambling letter. Get down to the meat of your inquiry at once, leaving out all unimportant details."

Among the many letters sent in for "Dr. Miller's Answers," some are models of neatness and clearness, but some of them would hardly be placed in that category. It is well always to give in connection with the questions any information or explanations to give a clear understanding of the case; other matter should hardly be mixed up with the questions, but given in a separate part of the letter. Besides having pages numbered, as suggested in the clipping, it is a great help to have the questions numbered. The reasons for writing only on one side of the sheet are more than one, hardly necessary to be given here, but if you want to be good you'll not write on both sides.

It is a real pleasure to receive some letters containing questions, which show at a glance just where each question begins and ends, and require no great amount of study to tell just what the questions are about.

"A Colony that Never Thinks of Swarming;" A Confession.—Under this caption appears the following editorial in Gleanings in Bee-Culture:

> Some little time ago Dr. Miller and I had a little tilt over the first part of this subject. I was taking the ground that the new shaken-swarm plan was going to do away with many of our difficulties. While Dr. Miller admitted that shaking was effective, and could be made very useful, yet he still expressed a hope that we might some day breed a race of bees that would go on storing honey without swarming, the same as poultry-men have bred several varieties of hens that are non-sitters. I argued that the gain would be only trifling, because a colony could be shaken at the convenience of the apiarist, and thus all desire to swarm be taken away from them in advance. Well, now, for that confession. The events of the last few days have completely converted me to Dr. Miller's view of the matter. While I still have as much faith in the shaken method as I ever had, and while not one of the swarms we shook this season has essayed to go out again, yet a colony that will *stay* on its brood-combs in its old brood-nest, and allow all its brood to hatch, is to be preferred because of the saving in the labor.
>
> At the Harrington yard we shook perhaps a third of our colonies—perhaps the strongest ones. The remainder we left just as they were. When the honey-flow came on it was apparent that the shaking had set them back a little. They had, temporarily, at least, been deprived of their brood, and it takes a day or so right in the honey-flow for the bees to recover themselves again to begin work. Then the brood, after it hatches, requires to be shaken again at the old entrance; and this causes another interruption, and possibly the loss of a queen. If the brood is not shaken back with the swarm after it hatches, then the shaken swarm will, before the season is entirely over, begin to feel the need of the young blood that would recuperate their fast-waning strength when it is most (if ever) needed in the whole season. But Dr. Miller's ideal colony that *never thinks* of swarming will at least keep right on working—keep all of its brood, save all the fuss and bother of shaking frames with starters in, the building of drone-comb, and with all its reserve strength will go on magnificently producing honey. But the never-think swarm I think is still largely a will-o'-the-wisp, and so we will have to content ourselves with shaking for the time being, and occasionally shinning up trees to bring back runaway swarms.

The question whether it is worth while to work toward a non-swarming strain of bees is one that will receive different answers from different persons. Some will say that the results with shaken swarms are so satisfactory that nothing further need be desired. There has been, however, testimony to the effect that in some cases shaken swarms have not had all the swarming mischief shaken out of them. Even if entire reliance could be placed in the shaking as a sure cure against any further attempt to swarm, according to the observation of Editor Root and perhaps others, "a colony that never thinks of swarming" will give at least a little better result than if interrupted by shaking.

There is no question as to the fact that there is a notable difference in different strains of bees as to the matter of swarming. Some are so given to swarming as to impair their value greatly, while here and there are reported cases where there is little or no swarming. A man who has bees that are greatly given to swarming will gain to introduce queens of stock noted for little swarming. If now he breeds persistently from those colonies that show the least inclination to swarm, will not swarming in that apiary become a constantly diminishing factor? He may never reach absolute non-swarming, but he may approximate it; and approximation is worth something.

What Kills a Queen in a Ball?—A difference of opinion prevails. Some think the queen is stung to death, others that she is starved to death, others that she is suffocated. Proof that stinging is the mode of execution is offered by the fact that the sting has been in more than one case actually found in her body. To this it is replied that these are exceptional cases brought about by the interference of the bee-keeper. If the effort be made to disengage the queen from the ball by pulling the ball apart, she will most likely be stung. If *hot* smoke be blown upon the ball, she will be stung. No one, however, has reported finding a queen stung in a ball when the smoker has been held from the ball at such a distance that no heat could be felt from it, the stream of cool, dense smoke being played continuously upon the bees until no longer endurable, when the bees of their own accord would separate from the queen. Neither has any one reported finding a queen stung in a ball if the ball is thrown into a dish of water. The water seems to dampen the heated fury of the ballers, and it is every fellow for himself (or herself) to escape a watery grave, leaving the queen, like the rest, struggling to escape. That does not prove, however, that the bees never sting a queen in a ball. An argument of some weight is the fact that if a strange bee enters a hive, and the bees are left to their own devices, the queen will be found hours later still alive in the ball. If stinging is the mode of execution, the bees could sting just as well first as last, and why such delay?

There is considerable to enforce the belief that death is caused by starvation. In the case of a laying queen, the great burden of eggs produced requires an immense amount of nourishment, and it is well known that such a queen is being constantly fed by the workers. Being deprived of all food in the ball, small wonder that she should succumb within a few hours.

That suffocation causes death does not seem very probable. It is not likely that the bees can be so densely packed in a ball as to prevent the entrance of all air. There will still be plenty of spaces to allow its entrance. Moreover, if the queen should be suffocated, would not the bees in immediate contact with her be also suffocated?

Until some one finds a dead queen in the midst of a ball with a sting in her body, the queen being already dead when the ball is first meddled with by the bee-keeper, it seems that the advocates of the starvation theory have the best of the argument.

Artificial Cell-Cups.—A correspondent of the British Bee Journal having had difficulty in getting the bees to accept larvæ in artificial cell-cups, sent a sample of the same to the editor, trying to find what the trouble was. The editor replies:

> We rather think the fault lies in your "cell-cups," judging by samples sent. These are all right, and nicely made at the lower or open end of the "cup," and also with regard to size and capacity of same, but the base of the cup has a little pit or well—so to speak—formed by the flat point of the stick or "dipper," which is altogether unsuitable in shape for the proper development of the queen-larva, and, as such, is probably rejected by the bees. Had the base of the cell been simply concave in shape, so as to form a *rounded* base to the cell, it would be far more likely to be accepted by the bees for queen-rearing.

In this country cell-cups are used of both kinds, but those of the "little pit or well" are specially intended to have transferred into them the larva in a little cup of the cocoon of its own cell. The comb containing the larvæ is shaved down till a shallow cup of the cocoon can be picked out, and this little cup, larva and all, is pressed down with a special instrument into the "well" of the artificial cell-cup. The bees accept this very readily, for the larva is left in its natural condition surrounded by the same food the bees gave it.

Whether these artificial cell-cups with the depression in the bottom would work just as well with the larvæ placed in them without the cocoon has probably not been tried much. But should a cell-cup with the little pit or well be altogether unsuitable in shape for the proper development of the queen-larva? Thousands of good queens have been developed in emergency-cells, and these have a pit of the same diameter and a good deal deeper.

Honey as a Health-Food is the name of a 16-page leaflet (3½x6 inches) which is designed to help increase the demand and sale of honey. The first part is devoted to a consideration of "Honey as Food," written by Dr. C. C. Miller. The last part contains "Honey-Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by every one who has honey for sale. It is almost certain to make good customers for honey. We know, for we are using it ourselves.

PRICES, prepaid—Sample copy free; 10 for 20 cts.; 25 for 40 cts.; 50 for 70 cts.; 100 for $1.25; 250 for $2.25; 500 for $4.00; 1000 for $7.50. Your business card printed free at the bottom of the front page, on all orders for 100 or more copies. Send all orders to the Bee Journal office.

◆

Amerikanische Bienenzucht, by Hans Buschbauer, is a bee-keeper's handbook of 138 pages, which is just what our German friends will want. It is fully illustrated, and neatly bound in cloth. Price, postpaid, $1.00; or with the American Bee Journal one year—both for $1.75. Address all orders to this office.

◆

The Premiums offered this week are well worth working for. Look at them.

Convention Proceedings

Proceedings of the Texas Bee-Keepers' Convention Held at the A. & M. College, at College Station, July 8 to 10, 1903.

BY LOUIS H. SCHOLL, SEC.

(Continued from page 550.)

BOTTLING HONEY.

It is a well-known fact that when honey is bottled at a temperature of 160° Fahr., or thereabouts, and sealed while still at that temperature, it will remain liquid indefinitely. It seems likely that the temperature at which granulation can be prevented will vary with honey from different sources. At the same time, too high a temperature when bottling will impair the flavor of the honey. To determine at what temperatures honey of different kinds could be bottled to best advantage, experiments were begun in February, 1903. Eysenhardtia honey, procured from Louis H. Scholl, of Comal Co., Tex., was bottled and sealed at the following temperatures: 150, 155, 158, 160, 163, 165, 168, 170, 173, 175, and 180 degrees. Six bottles of each temperature were corked and sealed with sealing wax, the intention being to open one bottle (each temperature) six months after bottling, one in a year, one in two years, one in two and a half years, and one in three years after bottling, and make comparisons of the flavor and keeping qualities. A bottle of the honey, corked but not sealed and without being heated, was also preserved.

Within three months the unsealed honey was thoroughly granulated. Up to June 1, none of the sealed honey had granulated. On June 17, the first series of bottles were opened and examined by Prof. Sanderson and Mr. Scholl, and upon these Mr. Scholl reports:

"The honey bottled at 150 degrees had retained its flavor, while the higher temperatures of heating had impaired the flavor. This was noticeable with only 5 to 8 degrees difference in heating, and that bottled at 180 degrees was very strong, and scratched the throat badly."

In this lies the suggestion of future experiments with honey of different kinds. Experiments could also be conducted to ascertain the most economical methods and mechanical arrangements for bottling, and the profit to be derived from placing honey on the market in this form. There is no doubt that honey in small, neat packages will bring a higher price than in bulk. Whether or not the increased price would be sufficient to make the increased work profitable, remains to be clearly demonstrated.

WAX EXPERIMENTS.

A series of experiments were undertaken recently to determine the proportion of wax in comb of different ages, and the best methods of removing same. The intention was to make the tests both accurate and extensive, but the scheme was not entirely completed, and it is hoped that this work will be continued to an exhaustive degree at the Experimental Apiary. The details of these experiments would be somewhat cumbersome, and as they will be submitted for publication elsewhere, only a summary of the results thus far obtained will be given here.

Old brood-comb, the age of which was undoubtedly five years or more, was analyzed and found to contain 36.3 percent of wax, 17.3 percent of soluble (in condensing steam) matter other than wax, and 46.4 percent of solids (insoluble).

Brood-comb two years old was found to contain 47.2 percent of wax, 21.1 percent soluble matter, and 31.6 percent solids. One-year-old brood-comb contained 57 8 percent wax, 22.1 percent soluble matter, and 20 percent solids. "Slum-gum" (refuse from solar wax-extractor) contained 24 percent wax, 40 percent soluble matter, and 36 percent insoluble matter. New comb, built upon full sheets of thin super foundation the present season, and which had never contained brood, contained 88 percent wax, slightly over 11 percent solids, and less than 1 percent soluble matter.

In a test of the Root-German steam wax-press, this machine, under full head of steam and careful operation, removed from the old brood-comb (five years or more) *80 percent of the wax contained*. From two-year-old brood-comb the machine removed 89.5 percent, and from new comb

98 percent of the wax contained therein. From slum-gum the steam wax-press removed 76.5 of the wax therein.

The solar wax-extractor was tested with brood-comb one year old and removed only 77 percent of the wax contained. It is also worthy of note that even from very old comb, bright yellow wax was secured by using the steam wax-press, esecially if the melted wax as it comes from the press be allowed to drip into cold water. The results of these experiments, when tabulated, appear as follows:

TABLE I.

Description of Comb.	Percent Wax Contained.	Percent Soluble Matter.	Percent Solids.	Percent Wax Removed by Steam Press.	Percent wax removed by Solar Extractor.	Percent Wax removed by pressure under hot water.
5 year old brood-comb.	36.3	17.3	46.4	80	Not determined.	Not det.
2-year old brood-comb	47.2	21.1	31.6	89.5	Not det.	Not det.
1-year old brood-comb.	57.8	22.1	20	Not det.	77	Not det.
Slum-gum.	24	40	36	76.5	Not det.	Not det.
New comb built on thin super foundation.	88	Less than 1 percent	11	98	Not det.	Not det.
Cappings.	Not det.	Not det.	Not det.	Not det.	Not det.	Not det.

The above table indicates also what points remain to be determined in order to make the series complete.

HIVE-COVERS.

Six different hive-covers were tested to determine their resistance to heat, when placed in direct sunlight. As the bees in any colony always attempt to maintain the normal temperature within the hive, a comparison of covers, made upon hives containing colonies, would not be accurate, accordingly six empty supers, each having upon it a different cover were exposed May 30 and June 1 to steady sunshine from 8 a.m. until 7 p.m. At no time during the day were they disturbed, nor was any circulation of air allowed inside of them. Each super contained a tested, self-registering thermometer which registered the highest temperature, that is, in direct sunlight; a similar thermometer was placed on top of one of the covers. The covers tested were as follows:

Excelsior cover; Excelsior cover with shade-board made of one-inch pine, 24x30 inches, raised 3 inches above cover by means of cleats, thus allowing a free circulation of air between cover and shade-board; Ventilated gable-cover; Double, paper-covered, with dead-air space between two portions of cover, designated as "flat cover." "Hill" cypress cover, made of a solid one-inch cypress board, with heavy end-cleats. "Lewis" cover, made of ¼-inch pine, covered with tin, and allowing a contained space of about 2 inches above top-bars.

All the above were covered with two coats of white paint. The highest temperatures attained under these covers are given below:

TABLE II.

Cover.	Date.	Temperature in Sun.	Maximum attained under cover.
Excelsior.	May 30	102° F.	93.8 F.
Excelsior with shade-boards	May 30	102° F.	93.4
Ventilated gable.	May 30	102° F.	93.5
Double cover dead-air spaced.	May 30	102° F.	94.5
"Hill" Cypress.	May 30	102° F.	97
"Lewis" metal covered.	May 30	102° F.	94.2
Excelsior.	June 1	103.5	93.8
Excelsior with shade-board.	June 1	103.5	92
Ventilated gable.	June 1	103.5	92.5
Double cover dead air spaced.	June 1	103.5	94
"Hill" cypress.	June 1	103.5	96.9
"Lewis" metal-covered.	June 1	103.5	93.5

For the two days it will be seen that the temperature under each cover, averaged as follows: Excelsior with shade-board, 92.7 degrees; Ventilated gable cover, 93 degrees; Excelsior, 93.8 degrees; "Lewis" metal-covered, 93.85 degrees; flat (dead-air) cover, 94.25 degrees; "Hill" cypress, 96.95 degrees.

It is regretted that warmer weather was not immediately at hand for a more crucial test, and it is hoped the experiment will be repeated during the hottest weather.

NORMAL TEMPERATURE OF BROOD CHAMBER.

In order to determine the normal temperature of the brood-nest, for comparison with above results, a self-registering thermometer was placed in a 5-frame nucleus and left 24 hours. Another was placed in a full colony (*crowded* with bees forced down from the super into the brood-nest for the purpose) and left the same length of time. Both nucleus and full colony were protected from the sun. The maximum temperature attained in the nucleus during the 24 hours was 94 degrees, and the maximum in the crowded colony was 94.5 degrees. We conclude, therefore, that the normal temperature is between 94 and 94.5 degrees. Any cover that in the hottest weather will not allow an inside (of an empty hive) temperature of more than 94 degrees may be considered a safe cover. Any cover allowing a higher temperature than this, even if no more than one degree, is detrimental. It is much easier and more economical for the bees to *raise* the hive temperature to their normal of 94 degrees by heat production than it is for them to *lower* the temperature to 94 or 94.5 degrees by ventilation.

Any tight wooden cover, substantially made, with a good shade-board above it, is a better protection from heat than complicated or high-priced covers involving "new principles." We do not sanction such, as the latter for shade-boards are cheaply and easily made (where it is necessary to place colonies in the sun); and the ordinary cover and shade-board together usually cost less than the "special" covers designed for protection from the sun.

FUTURE INVESTIGATIONS.

Perhaps no industry can show more rapid progress and development within the past 30 years than apiculture. Indeed, present methods, making possible the profitable production of honey on an extensive scale, are the developments of recent years. The bee-keeping industry is peculiar in that the greater part of its development has been due to private enterprise and experimentation, rather than to scientific study by government experts or others employed especially for that purpose. The bee-keeper has received practically no assistance, aside from some very creditable work done by the United States Department of Agriculture, and a few insignificant spurts by several Experiment Stations. Several of the latter have started off in apicultural work with promise of attaining good results, but the majority of them have allowed the work to lapse—either from lack of funds or disinclination, or both—before they had really gathered together sufficient equipment for real investigation.

I think I stand without fear of contradiction when I say that to-day Texas has the best equipped experimental apiary in North America. The A. & M. College promises very liberal and material support for the future, and the management of this apiary is in most careful and competent hands. We are justified, therefore, in expecting most definite and profitable results in the future from our Experimental Apiary.

The problems which present themselves for investigation are both numerous and varied. I will not occupy more space than is necessary to call your attention to some of the more important ones.

RACES.—Prof. Frank Benton, of the United States Department of Agriculture, has made a careful study of the traits, characteristics and advantages of the principal races. His published works are familiar to all of you. However, much remains to be done along this line. It does not necessarily follow that a race adapted to Northern or Eastern States will be found well adapted to Texas conditions, and it is not likely, either, that a race giving the best results in one portion of Texas will prove the race best adapted to all portions of that State. There is a large field for experimental work in hybridizing these races and testing the crosses thus secured.

Taking the five races, Italian (for the present purpose the 3-banded Italians, Golden and Imported—or "leather"—Italians are considered as one race), Cyprian, Holy Land, Carniolan, and German (black), we have, by combinations, the following 10 possible crosses: Italian-Cyprian, Italian-

Holy Land, Italian-Carniolan, Italian-German, Cyprian-Holy Land, Cyprian-Carniolan, Cyprian-German, Holy Land-Carniolan, Holy Land-German, and Carniolan-German. However, in many forms of animal life the female is known to transmit to the offspring certain prominent characters or characteristics, and the male certain other characters. This is notably the case in the breeding of fancy poultry. The same principle is recognized by many bee-keepers in producing crosses between the races. If this be true—and we have no evidence that it does *not* hold true—each of the above crosses, or hybrids, is capable of producing two strains, in all probability distinct (more or less) from each other. As an illustration, the Italian-Cyprian cross could be produced in two ways: First, by mating Italian queens with Cyprian drones; and, secondly, by mating Cyprian queens to Italian drones. The same holds true of each of the above 10 crosses, making possible 20 strains.

But if it be true that queens transmit certain characteristics and drones certain other characteristics to the succeeding generation, then the above-mentioned 10 crosses *are not true hybrids*. A true hybrid could only be produced by the following procedure, taking the Italian and Cyprian races as an illustration: An Italian queen mated to a Cyprian drone will give a resultant strain, which, for convenience, we will designate as Italian-Cyprian. A Cyprian queen mated to an Italian drone will result in a strain which we will designate as Cyprian-Italian. If now an "Italian-Cyprian" queen be mated to a "Cyprian-Italian" drone (or *vice versa*), the resulting strain will be a *true* hybrid, possessing the "drone characteristics" and "queen characteristics" of both races. This gives us 10 more possible strains, or a total of 30 strains theoretically possible, from the five principal races. It is, of course, true, that owing to the close similarity to each other, of certain of the five races, many of the above-mentioned strains might be practically identical with each other. Theories are not always borne out in actual practice, however, and the above will give an indication of the possibilities along this line.

QUEEN-MATING.—Closely connected with the above is the problem of successfully controlling the mating of queens to such drones as may be desired. The Manum giant mating-cage, and the use of the glass carboy, have come very near to a solution of the problem, but its ultimate solution will come, as will also a means of mating queens more rapidly than by the use of nucleus-boxes.

HONEY-PLANTS.—These were mentioned in some detail at the beginning of this report, and it is here sufficient to reiterate that many promising foreign and American plants remain to be tested, and the regions of Mexico, New Mexico, Arizona, and even parts of Texas, may possibly yield native honey-plants worthy of cultivation.

HONEY-VINEGAR.—It seems probable that the cheaper and darker grades of honey produced in several Texas localities, and which now rarely net the producer more than 3½ to 4 cents per pound, could be converted into a high-grade vinegar at a considerable profit, and this with but a small amount of labor. There is room for profitable development along this line.

The ideal bee-hive has not yet been constructed, but a careful study of conditions, and of the bees themselves, together with careful experiments, should result in much better equipment than is now used.

At every turn the experienced bee-keeper meets unsolved problems and questions which he can not answer. Most of these offer suggestion for experimental work, which the individual can not take up owing to lack of funds and time, but which can be considered at the Experimental Apiary.

It seems but pertinent, also, that we should call your attention to the advisability of this Association taking steps to disseminate among our farmers and fruit-growers reliable information on up-to-date methods of bee-keeping. Such measures could not but accrue to your individual benefit and to the benefit of the State as a whole. Judicially managed, such steps would rapidly increase the membership of the Texas Bee-Keepers' Association, would tend to prevent the marketing (at low price) of "strained" and "log-gum" honey, and would make possible an annual output of honey at least four times as large as present crops, and that without the least fear of "glutting" the market.

WILMON NEWELL.

The convention tendered to Prof. Newell, who was the former assistant in the Department of Entomology and Apiarist in charge of the College Apiary, a vote of thanks for the good work he has done while at the College, and they regret that he could not remain at his place at the apiary. The secretary of the Association was instructed to inform Mr. Newell of this resolution.

It was also the sentiment of the convention, and the bee-keepers at large, that they were well pleased to see the position now filled by one of their own State, and one of their own number, Louis H. Scholl, too well known to all the bee-keeping fraternity to need extended introduction.

(To be continued.)

Contributed Articles

Education of Apiarian Writers—The Hive Question—Wintering—Excrements of Bees.

BY F. GREINER.

OUR good and esteemed friend from Rhode Island—it is needless to speak his name—has given us a great many interesting articles in the bee-periodicals of late. I have read them with both pleasure and profit, and would like to have a little private talk with you, Mr. Editor, for the gentleman is becoming rather personal in his last article in the June Review. He seems to carry the idea it would be serving the interest of the bee-keeping fraternity if we poor, every-day bee-keepers were "choked off" from having anything to say in the future, and that only the highly educated gentlemen and scientific bee-keepers be allowed to utter their ideas in public. Will it work?

It is without doubt a desirable adjunct for a writer on any subject, apiculture included, to have a college education, and to be "away up" in the sciences, and I wish that I, and everybody else, could have had such a training; but there are probably many who do write, and have written, good things without being educated; it is quite evident that a great many good things would not have been said had these been shut out.

Our good friend, the Rhode Islander, claims the bee-periodical readers have so long been fed on methods that they have lost all taste for the whys and wherefores; he urges looking into the latter first, and when we fully understand them then talk method. I would not dispute the soundness of such advice, but unfortunately we do not all come to the same conclusions after ascertaining the correct whys and wherefores. In many cases our conclusions are nothing more than opinions. I am afraid it is so to some extent with our esteemed and scientific friend, Mr. Miller.

Let us see. He has come to the conclusion, after many scientific investigations, that the Heddon hive is the best hive, and meets the wants of bees and bee-keepers best of any; is the best compromise between bees and the keeper. Other not less thorough and careful investigators come to the conclusion that the many sticks and spaces, particularly in the center of the hive, as in the tiered-up Heddon, are only a hindrance to the bees and retard development. Mr. Reidenbach, editor of the Phaelz-Bienenzeitung, discussed this matter at length in his paper. Dr. Dzierzon pronounces his twin-hive (a bar-hive) as the best hive. Many others in America, as well as elsewhere, are sure that better results are obtained with an unbroken brood-chamber.

Mr. Miller holds that a chaff cushion has no warmth of itself, which is correct. But a woolen blanket has no warmth of its own, and yet it gives us lots of comfort in a cold night. An inch board, even a two-inch plank, is not nearly as effectual. His claim that bees are not drawn to a chaff cushion any more than to an inch board is not valid, if I can understand the language of the bees correctly.

METHODS OF WINTERING BEES.

"As to what is the best method of wintering," again our opinions and experiences are at variance. Mr. Miller has not a very high opinion of the chaff-hive. He gives us his whys and wherefores, etc. His conclusion is that bees need no porous material around them. It is true that a strong colony with good queen and an abundance of good stores will winter in any sort of a hive without the least protection; but as colonies run, good results in wintering are not secured without a good deal of protection and fussing. For the first 10 years, when engaged in bee-keeping, I used to lose heavily, often losing as high as 50 percent. Since adopting the chaff-hive for out-door wintering my losses have been small, and might have been lessened still more by carefully looking after my bees. This is not saying that by wintering in chaff I have struck the best method, but that it is a safe way, giving uniformly good results. My strongest colonies are usually those which were well packed. The paper-covered colonies have not quite come up to them.

QUEEN-REARING—FEEDING QUEENS.

Mr. Miller has also investigated the matter of queen-rearing. He undoubtedly rears fine queens, and he has concluded that the Alley method is the best. In his whys and wherefores I fail to find convincing proof that the course he or Mr. Alley pursues is any better, or nearer to Nature's ways, than the course some others pursue. What can it matter what kind of cells we use, if we accomplish the same result, namely, have the young royal larvæ fed abundantly from start to finish, etc.? Is it not a matter of opinion rather than of superiority of method? I think the time will hardly ever come when a method will be found by which Nature can be outdone in the matter of queen-rearing.

Speaking of a queen-bee being fed by workers, Mr. Miller says: "When a queen is free to roam at will, she can get such food as she needs." Is this any more than opinion? Perhaps she *is* able to help herself to such food as she wants, but does she? That is the point. It is true that one may see a queen dip into cells of honey sometimes, but this is not yet proof that she does help herself to all she needs, though undoubtedly it is within her reach. Why is it we so frequently notice the queen-bee, when at liberty in her hive, being fed by the workers?

EXCREMENTS OF BEES.

Mr. Miller also resurrects the old bone of contention. Are the excrements of bees liquid or solid? I guess he is right, claiming authorities, to say that they are liquid. He, himself, has come to conclusion that feces, when voided by healthy bees, are *dry*. I doubt Mr. Miller means just what he says. I don't believe a bee could void dry matter any more than any other living being of the same or higher order. Would they not suffer from constipation in a most intensified degree? Caterpillars void, perhaps, as dry matter as any living thing, as far as we ordinary mortals can observe. We find their excrements sometimes of beautiful shape, apparently as being shaped under hydraulic pressure. We might call them dry, although they contain some moisture. But the feces of bees are not nearly as dry as these. They are somewhat soft and pliable, although thread-like. They do not break up, but naturally they soon become so dry as to become hard, when they may be broken up in little pellets.

Mr. Miller admits that the bees sometimes void watery excrements, and he lays it to the taking of watery honey, which is an opinion. There are probably other causes. For example, *fright* will produce the same effect, not only in bees, but also in other and more highly organized beings, even humans. It would seem that during the honey season, when conditions are as favorable for bees as they can well be, they ought always to discharge their excrements in the normal, healthy shape—dry—but they don't. Even at this time we sometimes notice watery excrements.

After bees have been confined a long time, as during the winter, their intestines usually become loaded, and the contents are frequently so watery as to be termed liquid. This condition, according to Mr. Miller and some others on this and the other side of the great pond, is pronounced a diseased one. But I hold again that it is a matter of opinion. For practical results the diseased condition really does not begin until the bees, while their confinement lasts, become unable to hold their excrements any longer, and discharge them in this liquid form inside of the hive. Is it not a fact that as soon as a colony can have a good, cleansing flight, and get relief by voiding their excrements, although they may be liquid, that colony may be termed healthy, and will develop normally afterward, if conditions otherwise are right?

ALL HAVE HOBBIES—EXPERIMENTING.

It is not my intention to go over the list of all Mr. Miller has said in the past. I only want to pick out a few things to show that even as well-informed men as he have their hobbies like others of us who are not so well educated. I appreciate fully what he has said. He is deserving of credit for trying to bring out the truth as it relates to the honey-bee and its management.

I agree with Mr. Miller, it is not safe to rely implicitly on text-books. We must go to the Bee and learn of her, and not take everything for unmistakable fact we find printed. It is my opinion that it is not only misleading, but really wrong, to proclaim this or that theory as true when really we have no proof. For example, "What reason have we to say that the queen-bee lays eggs in the worker-cells which she has knowingly fertilized with sperma from her spermatheca, and other eggs not so fertilized into the larger cells commonly called drone-cells?" What we do know is this:

"Eggs found in worker-cells usually develop into workers; eggs found in drone-cells usually develop into drones." It has not been proven beyond contradiction that a queen-bee lays *any* non-fertilized eggs, and *that she does so at will* is nothing more than assertion. That it is proclaimed as fact tends to hinder others from making further investigations. Is it so humiliating to admit that we don't know? The thinking mind rebels against the very idea of parthenogenesis. As such an eminent man as Prof. Leuckart has said: "To say that an unfertilized egg produces life is only admitting that we have no full conception of the things; in short, that we don't know enough." Scientific men have failed to find evidence that eggs taken from drone-cells were fertilized. This is admitted.

Mr. Miller says: "Let us go to the bee and learn of her." The American bee-keepers are leading the world in practical bee-keeping; they will also turn their attention to the scientific part of it and become a factor of importance here, also. I suggest to our scientific friends who can devote their time to matters of this kind, to make the following experiment:

Select a late after-swarm and hive it on all drone-comb. Drone-comb foundation will not answer, as the bees will not build drone-comb from it, as I have tested. After the queen has become fertile, make frequent examinations, and when a uniform stand of brood in all ages has been secured —it will be worker-brood in drone-cells—remove the queen and note what will happen; particularly see whether any drones are being reared. Try the same experiment a number of times; also, early in the spring, say in March, before the drones are being reared by the best of colonies. The object is to prove whether or not drones are reared from what is termed unfertilized or fertilized eggs.

A second experiment would be this: Obtain perfectly fresh eggs from drone-cells laid by a queen under normal conditions. To accomplish this, I suggest taking a drone-comb from an extracting super, one which has in part been left free from honey, evidently for the purpose of having it filled with eggs by the queen, but being hindered by the queen-excluder has not been able to reach this part of the hive. Such combs are frequently found, and are all ready for the reception of eggs, and will be quickly occupied. Insert this comb in the middle of the brood-nest of a colony desirous to rear drones. It may take but a few minutes before the queen will busy herself upon it. Remove the comb as soon as a few eggs have been deposited, and before the bees have had an opportunity to visit the cells containing them.

If fortunate enough to obtain these untouched eggs, cut out the pieces of comb and give to a hopelessly queenless colony having no brood of any kind, for the purpose of rearing queens. The object of this experiment is to see whether the *so-called* unfertilized eggs will produce a queen. This experiment should be repeatedly made, as we may not be successful in obtaining absolutely fresh eggs. It requires a great deal more care in its execution than the other experiment. It should be borne in mind that after an egg, either in a queen-cell or drone-cell, has once been subjected to incubation, it cannot be made over into anything else. A worker-larva three days old may be built up into a queen; not so a queen-larva, if ever so young, could be made over into a worker. Its destiny has been shaped from the moment the first worker-bee visiting it left the cell serving it as its cradle.

By such and similar experiments some of the knotty questions may be settled without having to depend upon the microscope. It does not require a college education to make these experiments, but if such men as Prof. Cook, for instance, would make them, their conclusions would have more weight with the fraternity. Ontario Co., N. Y.

Queenie Jeanette is the title of a pretty song in sheet music size, written by J. C. Wallenmeyer, a musical bee-keeper. The regular price is 40 cents, but to close out the copies we have left, we will mail them at 20 cents each, as long as they last.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Succeeded Beyond Expectation.

I think likely there is much in my experience as a bee-keeper that might be encouraging and helpful to other women, but it takes time to write it, and I seem to have little of it to spare, and especially at this season of the year.

I have over 200 colonies of bees in two yards, one at home where the work is done by a young man who has made his home here for several years, and the other located 3½ miles north of us that I take care of myself, driving out there early mornings and returning at evening. I find the work interesting, profitable and pleasant.

My failures have been few, and my success far in advance of what I expected when I took up the work.

The basswood has no blossoms this year, but white clover is plentiful, and yesterday I hauled home eight supers of nice, white comb honey. Clara West Evans.

Allamakee Co., Iowa, June 30.

Kept Bees 8 Years—Honey-Cakes.

There are no bee-keepers around here, and I often wish I had bee-keeping friends here so I could visit and talk bees. I have not lived here quite two years, so I do not know for certain whether it is a good locality for bees. There are lots of dandelions, three kinds of clover, basswood, fireweed, and any amount of blueberries and wild flowers.

I have never had more than 50 colonies at one time; I have only 25 now. I sold some when I moved here.

My son and I work together. I think it is much nicer work than housework. I do not mind the stings at all, just a little pain, and I don't think any more about them. I always work with bare hands. I have kept bees eight years. Honey sells here for 15 cents a pound, and there is a good market at that price.

I enjoy reading the Sisters department very much; it is fine. I wish more would write for it. I will send a recipe you can use, if you wish; perhaps you have it now.

I want to tell you that I have "Forty Years Among the Bees," and it is the finest book of the kind that I ever read; I never get tired reading it.

White clover is just coming into bloom, and I have had but two swarms. It is raining all the time, and is likely to continue for weeks to come. Mrs. L. A. Mosher.

Crow Wing Co., Minn., June 8.

The following is the recipe referred to:

FINE HONEY-CAKES.

One quart of honey; ½ pound white sugar; ½ pound of fresh butter; 1 teaspoonful soda; juice of 2 oranges. Warm this enough to melt the butter, stir hard, adding 1 nutmeg. Mix in 2 pounds of flour, mixing it hard enough to roll; cut out with the top of a tumbler. Bake well.

Hiving Swarms from Tall Trees.

I take a great interest in the Sisters department in the American Bee Journal, especially so on the subjects of hiving swarms on tall trees. I could not help smiling at the different methods that were given, since you all seemed to aim to get the bees to the ground, which is not the most desirable. What we are after is to hive the swarm, *i. e.*, to get it in the hive so that it will stay there. Now, if you wished to get two things together you would certainly not try to take the heaviest to the lightest, you would take the lightest and carry it to the heaviest.

Therefore, if we have a swarm on a tall tree and the hive on the ground, we can get the hive to the swarm easier than the swarm to the hive, which I do in the following way:

I procure a stone, tie it to a light cord and throw it over the limb on which the swarm is clustered. Now we have the cord over the limb, by which we can draw a heavier rope over the limb. Having gotten the rope over, I tie the hive (which has a bottom-board with an entrance at each end) to one end of the rope and pull on the other end, thereby raising the hive up to the swarm. When the hive reaches the swarm the bees will at once enter, and before long they will all be hived, and the hive may be lowered. The hive should be as light as possible. The two entrances are used so as to be sure of getting one faced toward the swarm.

I clip all my queens, but occasionally one gets superseded and swarms the same year.

I hope you will put this in the Bee Journal, as it will help a good many, and may save some doctor bills, since it is quite different when the hive falls and when the man falls. I have gotten several swarms for my neighbors in that manner, who would not risk their lives for a swarm, but they are "on to" the kink now.

Philadelphia Co., Pa. Louis J. Bergdoll.

A Letter from a German Sister.

An interesting letter comes from Mrs. Lizzie Schmitt, a German woman who thinks she must write in German because she can not write English correctly enough. Neither she nor others need have any fear on that score. Any inaccuracies of language are easily corrected. At our house German print can be made out fairly well, but when it comes to German writing it is like some people's washing, it has to be sent out to be done.

Mrs. Schmitt has been keeping bees for some time, but since taking the American Bee Journal her progress is more satisfactory.

She had the misfortune to be visited by that dread scourge, foul brood, but got rid of it in one season, which speaks well for her activity. Last year, from 48 colonies, she secured 2500 to 2700 pounds of honey, and in spite of the unpropitious opening of the present season let us hope that she will beat that record this year.

Her husband has become interested in the work, and it is somewhat in contemplation to rent the farm and follow bee-keeping exclusively.

She thinks it would be a good thing if more women would embark in bee-keeping and add to the interest of this department.

We shall look with interest for further reports from our German sister.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Annual Amount of Honey—Drone Characteristic—Amount of Honey Gathered by a Worker-Bee.

1. What is the amount of honey produced in the United States annually?

2. What is the scientific name of the characteristic which allows the drone to enter any hive in the apiary?

3. What is the amount of honey a worker is supposed to carry in during its life? New Hampshire.

Answers.—1. I don't know. The government has made some attempt in the matter, but its reports are known, at least in some cases, to be very unreliable. I am sorry to say that I do not now have at hand even the approximate estimate that has been made. I refer the question to the constituency at large, hoping that some one will help us out.

2. I have never heard any scientific name for it, although it is possible there may be one. In popular language they are called "free commoners."

3. I don't know. It is easy to understand that it is a very variable quantity. Estimating the average life of a worker through the working season at 6 weeks, and allowing it to commence field-work when 16 days old, we have left only 26 days in which it is a gatherer. There may be a dearth during the whole of that 26 days of such character

that it will gather almost nothing, and there may be a continuous flood of honey during the entire span of its life.

Although the question is of such character as not to admit of an absolute answer, there is no law against making some approximation at an estimate. Suppose a colony to have 30 000 fielders at a time when the honey stored and consumed during 26 days amounts to 60 pounds. Dividing that amount among the 30,000 gives about a thirtieth of an ounce for each. That is, it would be the life-work of 30 bees to gather an ounce of honey, and the gathering of a pound section would wear out the lives of 500 bees. Taking the whole season through, that is probably much above the average, and in very exceptional yields it might be doubled or trebled.

Spring Demand for Bees—Preventing Increase—Piping of Queens.

1. Is there any demand for bees for shipment in the spring? I would advertise through the American Bee Journal at the proper time.

2. Please give one or more plans to prevent increase. My practice has been to clip queens' wings, and, when they swarm, remove the hive to one side and place an empty one in its place, and when the swarm returns let the queen run in with them ; then in eight days (or when I hear the young queen piping) destroy all queen-cells.

3. How would it do to hive them in a temporary hive, then kill the old queen and immediately go through the hive and destroy all queen-cells but one, then run the swarm back to their original place ? Would they *then* be likely to swarm again ?

4. At that stage the queen-cells have not progressed very far. Would they be likely to start others from eggs or larvæ ?

5. Does a young queen always pipe before a swarm issues ? Mrs. Tupper said she never knew a swarm to issue that she did not hear the young queens piping. IOWA.

ANSWERS —1. There is usually demand, and sometimes very great demand, for bees in spring.

2. If you don't care for the labor of hiving, here's a plan that will leave you with absolutely no increase : Simply return every swarm that issues. You might have to return the swarm once or more before the dispatching of the old queen, and then one or several times before the issuing of the last queen from its cell. After that there would be no more trouble. You can vary from that in a way that will probably suit you better. When you find sealed cells, remove or kill the old queen, or else wait for the first swarm, return it, and kill the old queen. Then wait till you hear piping, and destroy *all* cells.

3. That would do, only it isn't always safe to depend upon one cell. Sometimes a cell does not contain a good queen. Better wait till the first young queen issues. You may as well save the trouble of hiving in a temporary hive by returning at once to the old hive.

4. Yes, but there would be no advantage in it.

5. You may safely count on the piping.

Feeding Bees—Rearing Queens—Queenless Bees.

1. On page 335, Edwin Bevins says that he feeds granulated sugar and water with the pepper-box feeder. Will not the food run too fast ? I cannot feed sugar and water with the pepper-box on that account. How does he do it ?

2. When you wish the bees to replenish the brood-chamber, how do you feed, and where do you place the food ?

3. Should you desire the bees to carry the food to the supers, where do you place it ?

4. Should you have an extra brood-chamber on that you wanted emptied so as to preserve the combs for next season, how would you get the bees to empty them ?

5. What do the bees do with the honey they fill up on when disturbed ? and what do they do with it when they rob ?

6. Are they not compelled to disgorge themselves before they could or would go out foraging again ?

7. What is the appearance of brood sufficiently young to give to a queenless colony to rear a queen from ? and what is the limit of age ?

8. When you find little patches of brood deposited here and there in the combs, what does it indicate ?

9. Did you ever see a case where the combs had no brood, but it was in the first super above the brood-chamber (at the present date, July 23rd) ?

10. Why do bees allow queen-cells to remain on their combs when they have already a laying queen ? I refer to unsealed cells, of course.

11. Will queenless bees continue to build queen-cells as long as they are queenless, after you tear them away ? and is that a sure sign they are queenless, together with having no brood ?

12. Where a queenless colony is to be united with a colony that has a queen, is there any danger of the queenless bees killing the queen ? and where you see they are disposed to unite peaceably, would they then respect the queen ? MISSISSIPPI.

ANSWERS.—1. He may have smaller holes for the passage of the liquid, or he may have a piece of cloth inside.

2. If feed is needed in the brood-chamber, you may count on the bees putting it there in preference to any other place, no matter how you feed nor where you place the food. I use Miller feeders, placing the food on top. The crock-and-plate plan is also good.

3. Please disabuse your mind entirely of all throught that by different placings you can get the bees to carry the feed to certain places. No matter where or how you feed, the bees will first fill vacanies in the brood-chamber, and then turn their attention to the super. But surely you don't want sugar syrup in the super.

4. Take it off the hive and let the bees rob it out.

5. When they fill up because disturbed, they may afterward return the honey to the cells, but I suspect they generally take pretty good toll for their own use. What they get by robbing will be generally deposited in the cells.

6. Possibly not compelled, but I think they always go out empty.

7. Three days from the time the grub hatches out of the egg is theoretically the limit of age ; but I suspect that younger brood is better, because when left to their own choice the bees use younger. Be sure that they have at least some cells containing the smallest larvæ. If you give them all kinds, from eggs to sealed brood, they'll make the proper selection.

8. Perhaps a failing queen.

9. No, but such a case might easily be, especially if a swarm should be hived in an empty hive and a super at once given in which the bees had already begun work.

10. I don't know, it's a way they have.

11. Occasionally queenless bees will not start cells, and sometimes they will have cells and no brood while a queen is in the hive.

12. The queenless bees will not disturb the queen if already fully conscious of their queenlessness, and a peaceable uniting means kindly treatment of the queen.

Returning After-Swarms—Destroying Queens.

Last spring I bought 2 colonies of bees. I transferred 3 swarms from hollow trees and caught several "tramp" swarms. I caught one the 19th of May. It cast 3 swarms, and the first one cast a swarm to-day, so that I have had 25 swarms—too many, entirely.

On page 457, is an easy way to return after-swarms. Will they destroy the queen every time put back, or will they come out again with the same queen ?

Do we have to destroy the queens ? MISSOURI.

ANSWERS.—When an after-swarm issues, a young queen emerges with it, and one or more young queens are allowed to issue from their cells in the old hive. Then when you return the swarm there is a battle, and the victorious queen issues with the next swarm. This may go on so long as any young queens are left in the cells. When all are out of the cells there will be a fight to the finish, and only one queen left, and consequently no more swarming.

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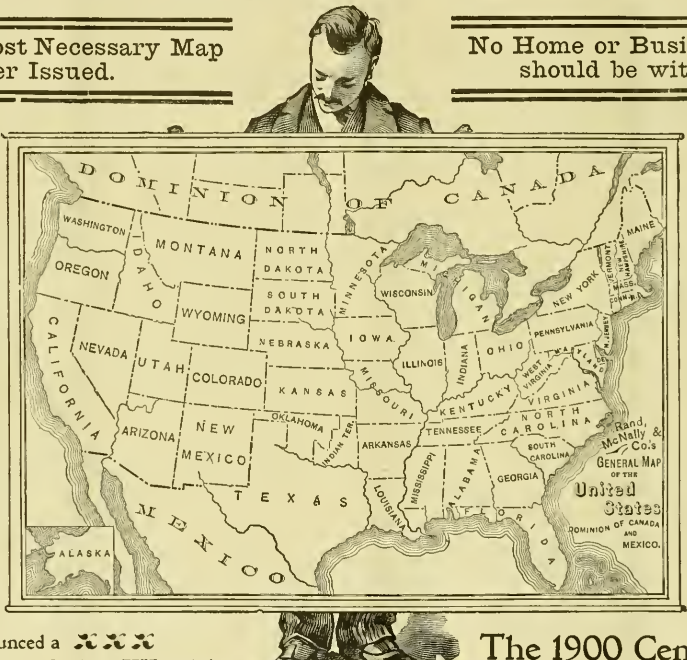
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to lift them all off for the sake of putting the empty one under. So, in one of the rounds a week or so ago, partly because it was easier and partly for the experiment, we lifted off no supers, but just put an empty super on top wherever the upper super appeared pretty full. That one experiment was enough. When we made the next round, four or five days later, we found work not pushed so very hard in the added super; but in the other supers wax and burr-combs plastered everywhere in wasteful profusion, built on to the separators and between the supers, spoiling the appearance of some of the sections, besides a waste of wax that might have paid for the extra work. If only two supers had been on the hive, so that the upper empty super would have been nearer the brood-nest, likely the bees would have begun work in it more promptly, but the burr-comb business would have been worse."

Scissors for Queen-Clipping.

Some time ago I ran across a peculiar pair of scissors that looked promising. The price seemed a trifle high, but as a venture I bought them, and now could I not get another pair I would not part with them for twenty times their cost. Clipping with them is a real pleasure, and one is half inclined to try fancy trimming of the workers' wings just for the fun of it. The handles three inches, blades one inch long, but their virtue lies in the shape of their blades, which are exceedingly slender, with finely rounded points, and all parts but the cutting edges are rounded and polished. They slip under the queen's wings almost of their own volition. There is no danger of impaling the queen on any sharp points, or of denting her abdomen with the sharp side of a wide blade. It is not even necessary to pick the queen from the combs, but just hold her still by pressing her thorax against the comb with one finger, and then snip the desired wing or wings.

Good tools pay, and he who works with poor tools is more than twice tired.—ARTHUR C. MILLER, in American Bee-Keeper.

Reading Bee Books and Papers.

For a beginner to take a bee-paper and not have a good text-book on the subject of bees is about like a child being started to learn to read in the third reader before he has learned his A B C's, for many of the questions that puzzle the beginner are fully answered in the text-books, but are seldom ever referred to in the bee-papers. Let it not be considered, however, that a single text-book and one bee-paper are sufficient for the progressive bee-keeper, for no author of any book is infallible, and while he may cover certain subjects thoroughly, another author may handle some other subject more ably, and the practical bee-keeper has no time to waste on any method that is not the shortest and best way of accomplishing the desired effect.

On the other hand, the bee-keeper should not make a book-worm of himself. In the long, winter evenings, he may profitably read nearly all that appears in the bee-papers, but in the busy time, when the bees are requiring his attention, and he has many other things to look after, when the time between dark and bed-time is short, he can not hope to read all, if he is taking several papers. He must be able to run through them and decide from the

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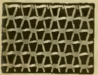

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letters and head-lines what will interest him the most. He will then probably miss much that would be of benefit to him, but better let it pass than to neglect the bees or some other important matter that requires attention.—S. E. MILLER, in Progressive Bee-Keeper.

Arrangement of Supers on Hives.

I don't know what's the best arrangement of supers on hives; but at present we have settled upon this order: An empty super is put next the brood-nest; next above this the super nearest completion, and so on, the one least advanced being on top. If it seems possible that more room may be needed, an additional super is put above all. Next time around, this upper super generally has the foundation drawn, but no honey in it—sometimes a little honey, and sometimes the foundation not drawn at all.—A Stray Straw in Gleanings in Bee-Culture.

Some German Uses of Honey.

From a honey leaflet sent out by P. Waetzel, Freiburg, I take the following recipes:

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"Honey and unsalted butter made into a salve is excellent in case of scalds and burns."

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How Moore's strain of Italians roll in the honey down in Texas.

HUTTO, TEX., Nov. 19, 1902.

J. P. MOORE.—Dear Sir:—I wish to write you in regard to queens purchased of you. I could have written sooner, but I wanted to test them thoroughly and see if they had those remarkable qualities of a three-banded Italian bee. I must confess to you I am more surprised every day as I watch them. They simply "roll the honey in." It seems that they get honey where others are idle or trying to rob; and for gentleness of handling, I have never seen the like. Friend E. R. Root was right when he said your bees have the longest tongues; for they get honey where others fail. I will express my thanks for such queens. I am more than pleased. I will stock my out-apiaries next spring with your queens.

Yours truly, HENRY SCHMIDT.

The above is pretty strong evidence that red clover is not the only plant which requires long tongue bees to secure the greatest quantity of nectar.

Daughters of my 23-100 breeder, the prize-winner, and other choice breeders: Untested, 75 cents each; six, $4 00; dozen, $7.50. Select untested, $1.00 each; six, $5.00; dozen, $9.00. Safe arrival and satisfaction guaranteed. Circular free. I am filling all orders by return mail, and shall probably be able to do so till the close of the season.

J. P. Moore, L. Box 1, Morgan, Ky.
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We have a strain of bees bred specially for honey-gathering and longevity, at the following prices:

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One Tested Queen .... .80
One Select Tested Queen. 1.00
One Breeder Queen 1.50
One-Comb Nucleus (no Queen).................. 1.00

These prices are for the remainder of the season.

Queens sent by return mail. Safe arrival guaranteed. For price on Doz. lots send for Catalog. J. L. STRONG,
16Atf 204 E. Logan St., CLARINDA, IOWA.
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quality of their work in the supers. They enter the sections readily, cap their combs as white as the snowy range, and use little propolis. The quality of the work of our Carno-Italians is distinctly superior to that of the various strains of Italians in the same yard, while the quantity of honey they have stored is fully equal to the best Italian colonies.

A. I. Root on Depth of Frames.

The senior editor of the Gleanings in Bee-Culture, asked his opinion with regard to the advantage of shallow frames over those most commonly in use, thus expresses himself:

"Friend H., if you want my personal opinion in regard to the matter, I would say, stick to the Langstroth frame. Since I began bee-keeping, every little while somebody gives his reason for thinking the Langstroth frame is not the best shape or size, and more or less follow him; but in due course of time the new kind is dropped, and we get back to the standard Langstroth. There are not only more bees in the world on this size of frames than all other sizes together, but I am not sure but there are *ten times* as many. Perhaps I am not posted, and up to the times; but I very much doubt whether there is advantage enough in a shallower frame to pay to use another than the Langstroth.

The Future of Bee-Keeping.

This is viewed very hopefully by Mr. G. C. Creelman, Superintendent of Farmers' Institutes for the province of Ontario. In the course of an address before the Ontario Bee-Keepers' Association, reported in the Canadian Bee Journal, he said:

"We are getting inquiries every day about bees; people want to branch out, and we find the younger people are growing up and asking for information concerning the common things that are about them. I don't know anything amongst Nature's studies better than to give a child a hive of bees; if the parents, if the older brothers, those of you who are here, could take those children and bring them along, and get the school teachers interested, and offer prizes for the best collection at the fall fairs, raised by the boys, of flowers, fruits, and so on, I believe we would have such an awakening in apiculture that the amount of honey produced would exceed the demand, and if at the same time we carried along a package of tracts, and kept the papers full of it from one meeting to the other, and kept talking honey, honey, in all our agricultural papers, a very great interest would be taken, and the demand would be increased. You have to keep these things before the people.

"As it is at present, there is so much lack of interest that the chopping down of a tree, or having to feed the pigs, will keep them away from the meeting; but if they have been thinking of that meeting for eight months or a year ahead, you would have a very much greater attendance. I think you men, who are thinking along these lines, and using your brains to the very best advantage, are not doing enough; you are doing all this but you do not get a chance to tell the great number of people about it; you are to a large extent wasting time. A great many have heard these things before, and they are here for new inspirations, and to see if they can not increase along new lines."

Using Starters in the Brood-Nest.

It is a fact patent to all, I think, that a colony that is building a set of combs in the brood-nest, and that has at the same time ample storage room in the super, has all desire to swarm removed, and the necessity for rapid comb-building for storage purposes removed, and that the desire for workers in such a colony is paramount. Hence, nearly all the comb that is built by the bees, and immediately occupied by the queen, is built, worker size, whether the queen be one month old or three years old.

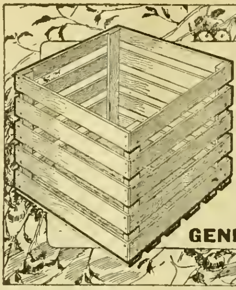
But to secure these conditions, everything must be normal. The colony must have a laying queen and an ample field force at the time they are hived, whether the swarm is forced or natural. Again, it is necessary to have a steady flow of honey; but these conditions nearly always prevail at such times in Colorado.

Any condition that will retard rapid comb-building, like an old queen with a good force of young bees and a small field-force, or a colony that has been given a frame or two of brood to help them, and has a small field-force, or a colony, let it be large or small, that is compelled to rear a queen, will invariably construct much drone-comb.

But I think it is still safe and advisable, here in Colorado, where our swarming season does not stammer along through the year, as in oriental countries, but is nearly all done in 20 days after the honey-flow begins, to continue the use of starters only in the brood-nest; and our reward will be a good crop of the most beautiful surplus honey that can be produced, and brood-chambers filled, with none too much drone-comb, as hundreds of my own, and others' hives will attest.—M. A. GILL, in Gleanings in Bee-Culture.

Four Tons of Comb Honey from 70 Colonies.

I promised you that I would tell you how I produced that four tons of honey from 70 colonies, spring count. In the first place, I had all young queens. I do not believe in keeping queens after they are two years old,



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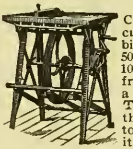

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Tells all about Bees in California. The yields and Price of Honey; the Pasturage and Nectar-Producing Plants; the Bee-Ranches and how they are conducted. In fact the entire field is fully covered by an expert bee-man. Besides this the paper also tells you all about California Agriculture and Horticulture. $1.00 per year; 6 months, 50 cents. Sample copies, 10 cents.

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for my experience has been that it does not pay. My method is to keep the bees from swarming if I can. I believe in double-deckers. I find that it works the best to add the extra brood-chamber when they need it. When the queen gets her hive full of eggs and brood, and needs more room, I do not wait for them to get the swarming fever, but raise up the hive and put another under it with drawn combs. I find that drawn combs are far ahead of foundation to keep them from swarming. I do not claim that they will not swarm, nor are all queens good enough for double-deckers, so an apiarist would be foolish to try to use a double-decker with a poor queen. With Dr. Miller, I am still looking for a strain of non-swarming bees. To produce comb honey we must have strong colonies, and keep them so without a desire to swarm. Proper ventilation goes a long way toward this.

Last spring and early summer we had cold weather. I used to go down in the yard and close the entrance according to the strength of the colony, on cold nights. Sometimes it would keep so cold that I would not open them up for two or three days. I have found that those with large entrances, especially on cold nights, did not breed as rapidly. When they are storing comb honey in very hot weather they need a good deal of ventilation from the *bottom*. I have tried raising the hive in the heat of the day, and then lowering it toward evening as it begins to get cooler. I use shade-boards, and I never raise the cover to ventilate unless it is a powerful colony, as they can not cap when there is a draft through the hive. If you do raise the cover, always lower it at night. Work with the bees, for they always want their ventilation at the bottom. Give them plenty of section room. As soon as they get one super well started I raise it up and give them another. I have found that they work all right in three supers; but when you get up to four or five they cap slowly in the upper supers.—GEORGE B. HOWE, in Gleanings in Bee-Culture.

Close Saturdays a 1 p.m.—Our customers and friends will kindly remember that beginning with July 1, for three months we will close our office and bee-supply store at 1 p.m. on Saturdays. This is our usual custom. Nearly all other firms here begin the Saturday afternoon closing with May 1st, but we keep open two months later on account of the local bee-keepers who find it more convenient to call Saturday afternoons for bee-supplies.

$5 TO START YOU IN BUSINESS
We will present you with the first $5 you take in to start you in a good paying business. Send 10 cents for full line of samples and directions how to begin.
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Catnip Seed Free!

We have some of the seed of that famous honey-producing plant—Catnip. It should be scattered in all waste-places for the bees. Price, postpaid, 15 cents per ounce; or 2 ounces mailed **FREE** to a regular subscriber for sending us one **NEW** subscriber to the Bee Journal for one year, with $1.00; or for $1.20 we will send the Bee Journal one year and 2 ounces of Catnip seed to any one.

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Forty Years Among the Bees, by Dr. C. C. Miller.—This book contains 328 pages, is bound in handsome cloth, with gold letters and design; it is printed on best book-paper, and illustrated with 112 beautiful original half-tone pictures, taken by Dr. Miller himself. It is unique in this regard. The first few pages are devoted to an interesting biographical sketch of Dr. Miller, telling how he happened to get into bee-keeping. Seventeen years ago he wrote a small book, called "A Year Among the Bees," but that little work has been out of print for a number of years. While some of the matter used in the former book is found in the new one, it all reads like a good new story of successful bee-keeping by one of the masters, and shows in minutest detail just how Dr. Miller does things with bees. Price, $1.00.

Bee-Keeper's Guide, or Manual of the Apiary, by Prof. A. J. Cook, of Pomona College, California. This book is not only instructive and helpful as a guide in bee-keeping, but is interesting and thoroughly practical and scientific. It contains a full delineation of the anatomy and physiology of bees. 544 pages. 295 illustrations. Bound in cloth. 19th thousand. Price, $1.20.

Langstroth on the Honey-Bee, revised by Dadant.—This classic in bee-culture has been entirely re-written, and is fully illustrated. It treats of everything relating to bees and bee-keeping. No apiarian library is complete without this standard work by Rev. L. L. Langstroth—the Father of American Bee-Culture. It has 520 pages, bound in cloth. Price, $1.20.

A B C of Bee-Culture, by A. I. & E. R. Root.—A cyclopedia of over 500 pages, describing everything pertaining to the care of the honey-bees. Contains about 400 engravings. It was written especially for beginners. Bound in cloth. Price, $1.20

Scientific Queen-Rearing, as Practically Applied, by G. M. Doolittle.—A method by which the very best of queen-bees are reared in perfect accord with Nature's way. Bound in cloth and illustrated. Price, $1.00; in leatherette binding, 60 cents.

Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—It is nicely illustrated, contains 160 pages. Price, in cloth, 75 cents; in paper, 50 cents.

Advanced Bee-Culture, Its Methods and Management, by W. Z. Hutchinson.—The author of this work is a practical and entertaining writer. You should read his book; 90 pages; bound in paper, and illustrated. Price, 50 cents.

Bienen-Kultur, by Thomas G. Newman. —This is a German translation of the principal portion of the book called "Bees and Honey." 100-page pamphlet. Price, 25 cents.

Apiary Register, by Thomas G. Newman.—Devotes two pages to a colony. Leather binding. Price, for 50 colonies, $1.00.

Dr. Howard's Book on Foul Brood. —Gives the McEvoy Treatment and reviews the experiments of others. Price, 25 cents.

Winter Problem in Bee-Keeping, by G. R. Pierce.—Result of 25 years' experience. Price, 30 cents.

Foul Brood Treatment, by Prof. F. R. Cheshire.—Its Cause and Prevention. 10 cts.

Foul Brood, by A. R. Kohnke.—Origin, Development and Cure. Price, 10 cents.

HONEY AND BEESWAX
MARKET QUOTATIONS

CHICAGO, Aug 7.—Consignments of the new crop are coming to commission houses that have not had honey for years past, and as there is not any consumptive demand they are finding difficulty in disposing of it. Under such conditions it is hardly possible to give accurate prices, as some merchants ask 10 cents for honey that others hold at 15 cents. The prices given in our last quotations are asked but feeling is unsettled. Beeswax steady at 30c.
R. A. BURNETT & CO.

KANSAS CITY, Aug. 25.—Receipts of comb honey more liberal; demand improving. We quote fancy white comb, 24 section case, $3.25; No. 1, white amber comb, 24-section case, $3.00; No. 2, white amber comb, 24 section case, $2.75; Extracted. white, per lb., 6½c; amber 5½@6c. Beeswax, 25@30c. C. C. CLEMONS & CO.

ALBANY, N.Y., Aug. 26.—Demand increasing; receipts light as yet, and could sell more comb than coming. Light, 15c; mixed, 14@15c; dark, 13c. Extracted quiet; light, 7c; dark, 6c. Beeswax, 30c. H. R. WRIGHT.

CINCINNATI, Aug. 6—The supply about equals the demand for extracted honey. We are selling amber extracted in barrels from 5½@6½c, according to quality. White clover, barrels and cans, 7@8½c, respectively. Comb honey, fancy, in no drip shipping cases, 16@16½ cents. Beeswax, 30c. THE FRED W. MUTH CO.

NEW YORK, July 8.—Some new crop comb honey now arriving from Florida and the South, and fancy stock is in fair demand at 14c per pound, and 12@13c for No. 1, with no demand whatever for dark grades.

The market on extracted honey is in a very unsettled condition, with prices ranging from 5@5½c for light amber, 5½@6½c for white. and the common Southern at from 50@55c per gallon. Beeswax steady at from 30@31c.
HILDRETH & SEGELKEN.

CINCINNATI, Aug. 8.—New honey is now offered very freely, particularly extracted. The demand for honey is about as usual at this time of the season. I made sales at the following figures: Amber, 5@5½c; water-white alfalfa, 6½c; fancy white clover honey. 7@7½c. Comb honey, fancy water-white, brings from 14@15c. Beeswax, 27@30c. C. H. W. WEBER.

SAN FRANCISCO, July 22.—White comb honey, 11½@13½c; amber, 8@10c. Extracted, white, 5¼@5 c; light amber, 4¾@5c; amber, 4¼@4½c; dark, 3¾@4¼c. Beeswax, good to choice, light, 27½@29c; dark, 25@26c.

This season's crop is not only unusually late, but is proving much lighter than was generally expected. While the market is unfavorable to buyers, the demand at extreme current rates is not brisk and is mainly on local account.

WANTED! FANCY COMB HONEY
In no-drip shipping-cases. Also Amber Extracted in barrels or cans. Quote your best price delivered Cincinnati. The Fred W. Muth Co.
32Atf Front and Walnut. CINCINNATI. OHIO.

WANTED—Comb Honey in quantity lots. We are perhaps the only dealers in this article owning as much as 150,000 pounds at one time. Please state quantity, quality and price asked for your offerings, Thos. C. Stanley & Son.
24Atf MANZANOLA, COLO., or FAIRFIELD, ILL.

WANTED—Extracted Honey.
Mail sample and state lowest price delivered Cincinnati. Will buy FANCY WHITE COMB HONEY, any quantity, but must be put up in no-drip shipping-cases.
C. H. W. WEBER,
2146-48 Central Ave., CINCINNATI, OHIO.
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WANTED!
TO BUY—White Clover Comb and Extracted **HONEY**—also Beeswax Spot cash. Address at once, **C. M. SCOTT & CO.**
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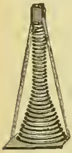

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July and August.	1	6	12
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" " (Tested)....	1.25	7.00	13.00
Golden " (Untested)..	.75	4.00	7.00
" " (Tested)....	1.25	7.00	13 00
2-frame Nucleus (no queen)	2.00	11.00	21.00

Breeders, $3.00 each, after June 1.

Add price of any Queen wanted with Nucleus.
Our bees are shipped in light shipping cases.
Purchaser pays express on Nuclei.
Safe arrival guaranteed of all stock sent out.

OCONOMOWOC, WIS., Aug. 1, 1903.
I like your queens. The best of any that I ever had. Respectfully yours,
FRANK D. GUNDERSON.

LITCHFIELD, ILL., Aug. 3, 1903.
DEAR SIR:—Enclosed please find money order for $1 50 for which send me two untested honey-queens. The one I bought of you two years ago is all right. There are no better.
Respectfully yours,
GUS PICAMAN.

Notice.—No tested stock sent out before May 15. Send money by P. O. Money Order or Express Order. **D. J. BLOCHER,**
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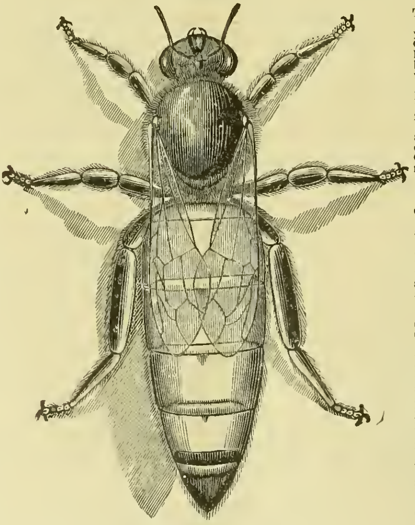

SPRING BLUFF, WIS., July 18, 1903.
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Dear Sirs:—I thought I would write you a few lines in regard to the Red Clover Queen I got from you. They haven't swarmed yet this summer, but I have taken 48 sections from them and there is 24 more all ready to come off.

Just think, 72 nice sections of as nice honey as ever was made, and only July 18th. It seems as though they will surely fill 48 more.

I don't know whether their tongues are any longer than any of the others, or whether they gathered it from Red Clover, but surely such bees are worth money.

I use the 8-frame Jumbo frame.
C. E. KELLOGG.

C. E. KELLOGG, Spring Bluff, Wis.

Dear Sir—We have yours of July 18th and would be glad to have you advise us by return mail with reference to the capping of the honey. Some parties say the capping from these bees is not white, and we would be glad to have you advise us how your honey is in this respect, and oblige, Yours truly,
THE A. I. ROOT CO.

SPRING BLUFF, WIS., July 31, 1903.
THE A. I. ROOT CO., Medina, Ohio.

Dear Sirs:—Yours of July 24th at hand to-day. In regard to your question in reference to the cappings of the honey from these bees I will say that it is simply perfect, beautiful snow-white and every box perfect. 96 one-pound sections now. I am quite sure they will fill two more supers, which will bring the number up to 144. I would like very much to have you see a few of those sections, and I will be glad to send you a few.

Now, I haven't told you ALL their good qualities yet. I am sure they are by far the most gentle bees to handle I have. I could take off the sections without smoke or veil without getting stung. There are a few traits about them that seem to me are quite remarkable aside from their honey-gathering; they don't seem to want to swarm.

I will write you again in a few weeks and let you know if they fill the 144 sections, which I am sure they will. Respectfully, C. E. KELLOGG.

AGAIN READY FOR PROMPT DELIVERY.

We were snowed under with orders for a few weeks, but here we are agai with good Queens and prompt service.

Red Clover and Honey Queens.

	Each.	Six.		
Untested	$1.00	$ 5.70	Breeding	$5.00
Tested	2.00	11.40	Select Breeding	7.50
Select Tested	3.00	17.10	Extra Select Breeding	10.00

With any of the last three we include one frame of bees and brood to insure safe arrival, for which we make no charge. These must be sent by express. Queen circular free.

THE A. I. ROOT CO., Medina, Ohio.

AMERICAN BEE JOURNAL

43d Year. CHICAGO, ILL., SEPT. 10, 1903. No. 37.

WEEKLY

C. P. DADANT,
Vice-President-elect of the National Bee-Keepers' Association.

THE AMERICAN BEE JOURNAL

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GEORGE W. YORK.

DEPT. EDITORS,
DR. C. C. MILLER, E. E. HASTY, EMMA M. WILSON

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2d.—To protect and defend its members in their lawful rights.
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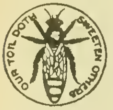
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AMERICAN BEE JOURNAL

THE OLDEST BEE-PAPER IN AMERICA

43d YEAR. CHICAGO, ILL., SEPT. 10, 1903. No. 37.

Editorial Comments

Preparing Honey for Shipping.—We are receiving many offers of honey, both comb and extracted, and also requests for shipping directions.

First, we may say that we are not in the market for any honey at present, and should we be later on, we will so announce.

Secondly, as to preparing honey for shipping—of course, most of our readers know that *we* prefer to have all extracted honey put up in the common 5-gallon or 60-pound square tin cans, two in a wooden box. And we would advise the following procedure for comb honey, when sent in less than car-load lots:

Only the very best and second best would we place on the distant market. We would put it into the ordinary 12, 20, or 24 pound no-drip shipping-cases, placing next to the glass a row of sections containing what would be a fair sample of the rest of the case. There should be no "facing" for deception.

Then, six or eight of these cases of honey should be put into a crate or box, but first putting in the bottom of the crate or box a layer of straw or hay several inches deep. This will serve as a cushion, and help to prevent the breaking down of the combs in handling when shipping.

After putting in the cases of honey, nail strips of boards across the top of the box or crate, and mark thereon, very plainly, "THIS SIDE UP. COMB HONEY. HANDLE WITH CARE."

Along each side of either box or crate, even with the top edge, should be nailed a board, say one inch thick, three or four inches wide, and about a foot longer than the length of box or crate, so that about six inches will extend beyond the ends of the box or crate, to serve as handles by which two men (one at either end) can carry it.

We would have each crate or box contain about 200 pounds of honey. Of course, 100 pounds each would do, but we think that the larger amount would be handled more safely, as it would be too heavy to tumble around, or to be easily overturned.

We have prepared comb honey for shipping as above described, and none was found broken after going hundreds of miles.

We once received a shipment of about 2000 pounds, sent to us from Minnesota in the ordinary 24-pound shipping-cases, each one being handled separately. The result was that at least a third of the honey was entirely broken out of the sections. And such a mess to clean up! Well, we don't want another like it for love or money. It was also a great loss to the shipper.

With proper care in preparation, comb honey can be shipped safely almost any distance.

Choice of Location for Bee-Keeping.—A young man just making a start, and intending to make bee-keeping the chief business of his life, will do well to look about and choose a place specially suited to that business. For that matter, so might one already engaged in the business. But he would be unwise, especially if already well planted, to go some distance to a new place, knowing nothing about it, but that some one had secured a very large yield of honey. Possibly that one year of great flow may be offset by two of failure. Possibly the distance or inconvenience of access to a market may be so great as to counterbalance the greatness of the yield.

Then there are considerations outside of bee-keeping not lightly to be ignored. Climate, home, surroundings, are all of importance. Some of the Northern bee-keepers in attendance at the National convention at Los Angeles, who had cast longing looks toward that golden land, went home entirely satisfied to remain where they were, after seeing some of the California apiaries. Of course, all locations in California are not the same, but some of them are dreary enough. To get the advantage of pasturage an apiary is located in some canyon away from the haunts of men, the nearest neighbor half a mile or more away, outside of the sound of bell of church or school. With many it is a life of exile during the honey season, the rest of the year being passed elsewhere, but all would not like that sort of life.

On the whole, taking into account ties of friendship and old associations, as well as trouble and expense of making a change, the probability is that not one bee-keeper in ten will find himself better off anywhere in the world than right where he is now.

Association Notes

MESSRS. W. F. MARKS AND O. L. HERSHISER gave us a call when on their way home from the Los Angeles convention. They were the only representatives from the State of New York who attended the convention.

NOTICE TO NATIONAL MEMBERS.—General Manager N. E. France, of Platteville, Wis., desires us to say that if any member of the National Bee-Keepers' Association has not received from him a set of questions on a sheet to fill out and return, or has not received the badge-button or any of the leaflets he sent to members—if such will send him a postal card notice at once, he will see that they are supplied. He wants all reports in soon, so as to include all in the annual report, which he hopes to prepare so as to be of value to every member.

If members of the National will kindly heed the above notice, and act in accordance therewith, they will only be helping themselves.

THE LOS ANGELES CONVENTION REPORT we expect to begin next week. We thought we could get in the first installment this week, but we have not received a sufficient portion of the proceedings from the stenographer to start it in this number. Also, we have been so very busy since our return from the convention that we have not yet had time to prepare some notes on the trip and meeting that we expected to publish. Few can realize what it means for us to be away from our office for over two weeks. But we are sure all our readers will excuse us for any delays, under the circumstances.

And on top of all the extra pile of work, we have also been suffering from a severe cold, which we contracted upon our return from the sunny clime of California. It almost put us in bed, but we kept up by main force in order to get through the accumulated correspondence, so that now things are running about as usual in this office. On a weekly publication, in addition to all our other business, we need to be here about all the time. It is very difficult to get away for more than two or three days at a time.

Convention Proceedings

Proceedings of the Texas Bee-Keepers' Convention Held at the A. & M. College, at College Station, July 8 to 10, 1903.

BY LOUIS H. SCHOLL, SEC.

(Continued from page 566.)

BEE-KEEPING FOR WOMEN.

For years past women have taken an active part in nearly every branch of the commercial world, pressing out into almost every known occupation which tends to the well-being of our great and prosperous country, and to-day we have the pleasure, as honorary members, of meeting with the men in their association to discuss the feasibility of bee-keeping for women.

Now, we are well aware of the fact that each year there are many of our sex thrown upon their own resources and compelled to grasp the oars of life's frail bark and stem the ocean tide. Some, I say, are compelled by circumstances, others choose such a course rather than consent to be the heroine of a pure and peaceful home, as beyond a doubt was the Divine purpose.

When a woman realizes that she is dependent upon her own abilities, the first question that confronts her is, What can I do—what can I do to win a livelihood and thereby be independent? The first thought usually is, I'll teach, or clerk, or something just as confining, and, we may say, ruinous to health and usefulness. Why did she not think for a moment of the possibilities which lie before the American woman to-day in some out-door vocation, and especially bee-keeping?

One reason, if she did think of it, such an idea was immediately dismissed as being impossible for women. Yet it is by no means impossible, for there are many women bee-keepers just as successful as men, and more so than some men, but we'll not charge that to the man's incapacity, though it could be the case, for there is room for such argument in some instances. Surely, bee-keeping was not slighted on such a plea. The pleasure it affords, and the healthful influences, together with the monetary results, recommend it to the consideration of every energetic young woman.

What is more enjoyable than to walk into your cool, shady apiary with smoker in hand on some fine May day, and hear the happy hum of little bees, as they come tumbling and crowding into the hives, laden with their dainties from field, forest and glen? Such sweet peace and pleasure may be any woman's for just a little time, and patience, and trouble. And then it's not only pleasant but very profitable. Like poets, bee-keepers are born, not made, but almost any live, energetic person can in time become a successful bee-keeper.

Again, it may be truly said it is no lazy man's job. Many hesitate because they have no experience in the work. If you have none of your own, falter no longer but fall in line and appropriate some of your fellow worker's. You may be able to pay back some day. That is what we are here for to-day, to help one another. This is a men's association, but I am glad they have thought of us lady bee-keepers and consented to take us in as honorary members, at least.

Bee-keeping is becoming more and more scientific, though there are some "way back yonder" farmers who are contented to have a few log-gums. In a few years it will not be so. Ladies, take the matter in hand yourself. Mr. Farmer will be too busy and sleepy over the subject to object. Transfer the bees into nice, new hives, and some morning he will open his eyes to see those neat rows along the front walk, and hear the bees with renewed energy humming on the near-by clover. There are other things he will think of, too, when there are a few nice, clean sections of honey to market, and then next time more, and still more. He will doubtless remember that he was once owner of those bees, yet he would never know it from their appearance now. Then there was honey for Sunday only, and it was dark and thick—not the nice, clean sections that now grace the table almost daily.

Let us arouse some of the men, too, on the subject. I suppose my father would never have thought of being a bee-keeper if his wife had not had a few patent hives when they were married.

The expenses of a beginner need not be great. Hives, frames, and other fixtures do not cost much now. A lady with a little help could make them herself. So, if one has not the means for securing these necessaries, they can easily be made on the farm. Almost every farmer's wife or daughter raises some chickens for market each year, why not invest the proceeds in bees so that in time you may make more than mere "pin-money?"

True, not all localities are adapted to the production of honey. In such cases queen-rearing might be followed with success, since fine tested queens are in demand all the time. Then the production of wax is another feature not to be overlooked. I think if the ladies who have the time to canvass their neighborhood with tea-sets or patent medicine would establish an apiary they would find it more pleasant and far more remunerative.

There is here in connection with other studies an apiary for the boys who wish to study this branch of the course. Have you ever asked yourself why the boys should have advantages over the girls? Are not the girls equal to the task? If so, then in the Girls' Industrial School, at Denton, let there be an apiary. Yes, let the boys learn to care for the "Jersey," "Durham," "Hereford," etc., and the girls to keep bees, then will we truly possess "a land flowing with milk and honey."

There was a day when girls knew not the fret and worry of securing a livelihood. But then we saw "as through a glass darkly," now face to face, and we are brought to realize that institutions whereby young women may be equipped for the struggle are a real necessity, and as we are called the "weaker sex," why not help the weak? So let us think of getting an apiary at the Girls' School. Not only think of it, but get it.

We hope to hear of many ladies taking up bee-keeping not only to add to their "pin-money," but to become an auxiliary to the wealth and income of the farm, and we wish to see in this assembly room, at our annual meeting, many lady bee-keepers fully interested in this new calling to our girls. MRS. BEN D. BURROW.

Grimes Co., Tex.

PREVENTION OF SWARMING AND INCREASE.

Since different bee-keepers are running out-apiaries, the question arises how to manage them during swarming time. If we let the bees swarm, and hire a boy for watching and catching the swarms, we have considerable expense, and can be sure that this boy will sleep somewhere in the shade just when a swarm is coming out and going off.

Since I have kept bees, now for about 40 years, I have tried to avoid this watching for swarms by making them artificially, just a little earlier than the colonies would swarm naturally. Of all the different ways to make artificial swarms, I found that brushed swarms on the old or on a new stand are the best, because they are quite similar to natural swarms; in some respects even better. In this way I managed an out-apiary from 1882 to 1893 for comb and extracted honey, and lost very few swarms. At that time I increased the number of my colonies; when I did not want more colonies I united two of the weaker colonies after the honey-flow or in the fall. In some localities and some years I still think that it is the best plan; and right here I want to say that a great deal depends upon the locality and other circumstances as to which management is the best.

In my locality, for instance, the bees commence to breed early; at the end of March some of the colonies in 8 or 10 frame hives are swarming already, but the main honey-flow from horsemint commences generally at the end of May. During this flow we expect no swarms at all. In other localities the swarming time commences just before the honey-flow, and continues all through it. This makes a big difference in the management to prevent swarming.

Now, I will tell how I do it. I use very large hives in the spring, and they prevent swarming to a great extent. When you have used them five or six years you will find out that your bees will be less inclined to swarm. In some years, very favorable for brood-rearing in the spring, a large number of colonies would nevertheless swarm, but they will swarm at least a month later than those in small hives. Once in awhile I go over my colonies, and if I find one very strong I remove the shallow stories to see whether the colony has comparatively much brood. If I find brood that would fill more than two stories (an equivalent to about 10 Langstroth frames), this colony is swarmed or divided artificially.

Now, you will say, We want you to speak of a plan, or some plans, to prevent swarming and increase. Well, it is this way: The plan consists of two parts. At first a brushed swarm is made, and then the second part of the manipulation, all the bees which will afterwards hatch from the brood are given back to this swarm at the proper time; and this can be done in different ways. If we produce extracted or bulk comb honey the plan is more simple, and I will explain it first.

One thing I have to mention. If a brushed swarm is made, or a natural swarm is used just at the beginning of the main honey-flow for producing comb honey in sections, I always give starters only in the brood-frames, and full sheets of foundation in the sections. For extracted honey I prefer empty combs, or full sheets of foundation in the brood-chamber. I think you know the reason for this. Now to our management.

FIRST PLAN.—If a colony is ready to swarm, and the honey-flow will commence in about two or three weeks, and extracted honey is to be produced, I set a new brood-chamber on the old stand with one comb containing open brood and the queen; the balance full sheets of foundation, a queen-excluder on top, and over this all the stories of the colony in the old order. If I can't find the old queen I brush off the bees from the brood-combs into the hive, or in front of it, till I am sure the queen will be under the excluder. This manipulation keeps this colony from swarming for three or four weeks, and consequently it depends upon the locality whether it is sufficient or not.

SECOND PLAN.—We need a simple implement for this plan. It is a board, like a Porter escape-board, but in place of the bee-escape it contains two square holes about 2x4 inches, and wire-screens nailed on both sides of the board over these holes, so the bees can't feed through. On one end, about 2 inches of the rim is cut out for an alighting-hole. These double-wire screens can be used in the apiary for different purposes.

Now, we again make a brushed swarm on the old stand with the old queen, a double wire-screen on top, the alighting-hole in the front, and on top of this all the brood-frames with a sufficient number of bees for nourishing the brood. A queen-cell from selected stock can be given to this upper colony. When this queen is hatched and fertilized the wire-screen is removed, and which queen is selected, we allow it to be fought out by the queens themselves. In nearly all cases the young queen will kill the old one, and this colony will not swarm any more the same year. This plan is the invention of Mr. M. R. Kuehne, of California, which he described to me in a private letter.

THIRD PLAN.—If we wish to keep the old queen we can use another trick. We set the hive with the brood-combs on the side of the brushed swarm, and give a ripe queen-cell, if none is on the combs. This colony is weak, and the first young queen that hatches will destroy the other queen-cells. In a week after brushing she will have done this job, and we will see it, if any queen-cell is found with the side torn open by the bees. Now, in the evening, we simply change the places of the two colonies, and one hour afterwards, when the bees have ceased to fly, we change places again. What's that for? Well, in the evening many field-bees from the swarm will enter the hive with the virgin queen; they are used to a fertile queen, and will kill the young one during the night in nine cases out of ten. The next morning we set this hive on top of the swarm, and a wire-screen between the two, which can be removed about six hours afterwards.

These plans can be used for the production of extracted honey. The old brood-combs, which are now on top of the swarm, will be filled with honey, which can be extracted. For the production of section honey we can use similar plans, but we have to overcome some difficulties.

The forced-swarm method for section honey has a double purpose. First, to prevent swarming, and, second, to have the colony in the right condition to start to work in the supers at once. This is secured by the empty brood-chamber. There are no empty cells in which honey could be stored, so it *must* go into the supers. For the first purpose we would not need any manipulation, because during the main honey-flow the bees will not swarm here. So it is plain the forced-swarm method must be used just at the beginning of the main honey-flow. Probably we can keep our bees from swarming before this time by using very large hives, and by spreading the brood once in awhile, or, in some localities, where the bees swarm just at that time, we can use the plan I recommended about four or five years ago.

FOURTH PLAN.—A brushed swarm is made as before, and the parent colony set at the side of it. The hatching bees are afterwards united to the swarm by using the well-known Heddon plan of preventing after-swarms or transferring. All this is old. If anything is new, it is that these old manipulations are used for another and new purpose.

FIFTH PLAN.—For this purpose, to add the bees hatching from the brood to the swarm, the bee-keepers in Colorado use another way. Over the top of the brushed swarm are set one or two section-supers, then the double-wire screen-board, and over this the brood-combs with some bees. Now, a canal is made out of three laths, which leads from the upper alighting-hole down near to the lower alighting-hole. The upper end of this canal is closed. The bees from the upper hive have to go down, and when they return to the hive they will mostly enter the lower hive. In three weeks all the bees have hatched, and can be united with the swarm, and the empty combs used elsewhere or melted into wax. I have some objections to this plan, but the Colorado bee-keepers say it works all right. Mr. F. L. Thompson described this way in the Progressive Bee-Keeper some time ago.

SIXTH PLAN.—Kuehne's plan, too, can be used for section honey, with a little variation.

SEVENTH PLAN.—Some of our Texas bee-keepers prefer smaller hives, and their bees commence to swarm one or two months before the main honey-flow. They have weaker colonies and weaker swarms. What would be the best plan for producing comb honey and avoid all increase?

I would use hive-stands on which I could place two hives close together. In the spring we have only one hive on every stand. The swarms, natural or artificial, are set close to a parent colony (not to that from which the swarm was made, but to one which was swarmed some days before this). When the main flow is beginning, and we have a single hive on a stand, it is a colony which has not swarmed. It can be manipulated according to one of the given plans. If we have a pair of hives on another stand it is a swarm and a parent colony. I would manipulate them in the following way:

We remove both colonies from the stand and set the brood-chamber of that colony, which has the young queen, in the middle of the stand, so it will catch the field-bees of both colonies. In this brood-chamber we will crowd the brood-combs which contain the most brood. If more brood-combs are in this colony we give it to the other colony with the old queen, but without bees. Now we put the section supers on, with or without a queen-excluding honey-board between them and the brood-chamber; on top of this a board with double wire-screens, as just described, and then the other hive with bees and all. The Colorado canal can be used or not. The field-bees of the upper hive will enter the lower hive. The next, or a few days afterwards, we kill or remove the old queen from the upper hive, and now the colonies are in the same condition as in the other plans, and the young bees are united with the main colony in one of the given ways.

EIGHTH PLAN.—Before I close I will mention the plan by which the bee-keepers of Colorado try to get rid of foul brood. When the honey-flow commences, the bees are shaken into an empty hive and treated on the McEvoy plan. All the brood-combs are given to another colony (a weak one will do), and here they are storified from several colonies as high as a man can reach. Twenty-one days afterwards all the brood has hatched, and now this colony, too, is brushed or shaken from the combs, the honey is extracted, and if the fumigating of these empty combs with formalin gas will prove to kill the spores of the foul-brood bacillus, we will have a true remedy for this pest. But do not forget that all the operations must be done very carefully.

NINTH PLAN.—If the colonies are in pairs close together when the honey-flow commences, we may unite them for comb-honey production and secure a good crop, even if they are not very strong. The queen of one colony is removed, killed or kept with one brood-frame and adhering bees in a nucleus. Now the bees of both colonies are brushed and shaken into an empty hive on the old stand, as described, and the brood-combs manipulated in the same way.

L. STACHELHAUSEN.

(To be continued.)

Queenie Jeanette is the title of a pretty song in sheet music size, written by J. C. Wallenmeyer, a musical bee-keeper. The regular price is 40 cents, but to close out the copies we have left, we will mail them at 20 cents each, as long as they last.

Contributed Articles

Something of Benefit to Beginners in Bee-Keeping.

(Read at the Minnesota Bee-Keepers' Convention.)

BY A. E. HOOKER.

I HAVE been requested to contribute a paper on this occasion, and do so somewhat against my inclinations; for the reason that I am not a large bee-keeper, and certainly do not pretend to be a scientific one.

I have kept a few colonies of bees with moderate success for a number of years, and, of course, have had an opportunity to observe them more or less.

This brings me to the point that suggested these few remarks, namely, positive assertions pertaining to the habits of bees, and to the subject of bee-keeping in general. Assertions which have been handed down from the past, together with some of more recent origin, that are too often repeated in view of the fact that they can not be relied upon. In referring to some of these I do not expect to say anything that will be new to experienced bee-keepers, but possibly what I shall relate of my own experience may be of some use to beginners.

For instance, in reference to the swarming problem, we are told that the requisite conditions for swarming are a good honey-flow, brood in all stages, and plenty of young bees. Now, we doubt not these conditions are usually found in a hive from which a swarm is about to issue; but it is not always so. As a matter of fact, I have had swarms when there was little or no honey coming in, and when I feared they would starve if not fed.

I have practiced caging queens to some extent to prevent swarming; and after confining a queen for 10 or 12 days, taking care that no queen-cells were allowed to remain in the hive, I have not infrequently known colonies so treated to swarm within a very short time after the queen was released, and before it was possible for them to have brood in all stages; in fact, with little or no recent brood at all.

In verification of this I quote one of many similar examples from my record of the past season: "Colony No. 31, July 4, swarmed." I will say here, by way of explanation, that I use entrance-guards on all hives from which swarms are expected; thus confining the queen within the hive and inducing the bees to return. This return of the bees must be looked after, however, as I shall hereafter explain. But to proceed with our record: "July 5th, caged the queen and removed all the queen-cells. July 15th, liberated queen and removed all cells. On the following day, July 16th, they again swarmed." This shows that under some circumstances bees will swarm regardless of the condition of their brood.

Again, we are told, when bees swarm without their queen, she being detained by entrance-guards or otherwise, that they will soon return to their hive. But all experienced bee-keepers must know that they very often scatter, and many of them enter some other hive, unless they are prevented from doing so. To obviate this, I aim to cover with sheets of cotton-cloth, immediately, all hives from which swarms are seen to start, and throw a little water over them. If done promptly and well, very few bees will get into the air, and, in a few minutes, the cloth may be turned back, and the swarm will usually be found clustered on the hive.

But in case a swarm should get out, and on their return attempt to enter some other hive than their own, cover that hive at once and use the smoker, if necessary, until they cease their efforts to enter.

We are also told that when a colony has cast a first or prime swarm, if they elect to swarm again, the second swarm will issue in 8 or 9 days after the first swarm. This is quite an important matter to the beginner, who accepts it as truth; for it may result in the loss of unlooked-for swarms. I have found this to be wholly unreliable. My bees hold the entire matter in supreme contempt. Young bees often hatch almost immediately after the first swarm goes out, and they are therefore ready to swarm again.

I will once more quote from my record of a previous year: "Colony No. 2, June 18th, swarmed; removed old queen; later in the day opened this hive and removed another queen, evidently a virgin. July 20th, swarmed, returned without clustering; young queen hatched; plenty of *very recent brood*." Here we have queens hatching on the same day the prime swarm issued. And, again, "Colony No. 8, June 13th, swarmed; removed the old queen; June 17th, young queen hatched."

I could quote from my records many similar instances, however it is not necessary to pursue the subject further. But, in passing, I wish to emphasize the necessity of subjecting all conclusions in reference to the conduct of bees to the severe test of a long and vigilant experience before publishing them as truths.

Bees are subject to such variable conditions that I think any affirmations in regard to their behavior should usually be qualified.

Again, beginners are sometimes disappointed by misleading statements concerning some of our modern inventions; as, for example, the case with which swarming may be controlled for a day or two by means of queen-traps or entrance-guards. Just put these on hives from which swarms are expected, and go away to town or where you please, perhaps leaving the children to look after the bees a little, and when you return home and have the time to spare, go around and see if there is anything to do. Just so.

But suppose, in the meantime, several swarms issue; some of them will be almost certain to cluster together, and, when they return, some hives will most likely get very few bees, and others will get more than their share. Possibly, too, to complicate matters further, a queen or two may be killed by the returning bees. And, again, it occasionally happens that a queen gets through the guard; or a colony may swarm that is not expected to do so, or a swarm from another apiary may come along and unite with your bees, and then off to the woods they all go together.

The serene bee-keeper, when he returns, may feel that the thing was a great success, being ignorant of what had transpired in his absence; but later, in all probability, he will come to the conclusion that bees do not pay.

Some time ago a very well known bee-keeper and contributor to bee-papers, wrote an article in which he set forth the merits of the Manum swarm-catcher, and expatiated upon the ease and certainty with which swarms could be managed by its use. I have not the article before me, but I recollect that the gist of it is: That with two or three poles, the longest being 20 feet—to meet, I suppose, *extreme* cases—any one could readily control the situation. Now, I had one of these catchers, but I had not used it very often. On reading the mentioned article, however, I resolved to try it again. This man must know what he is talking about, thought I; the fault must have been mine, if it had not always accomplished for me as much as he claimed for it.

An opportunity soon came. I do not intend to allow any swarms to cluster with their queens, but it sometimes happens, nevertheless. One day a swarm came out which I had reason to think might have a queen with them. They alighted on a limb of a tree, and I noticed that they chose a rather lofty location. But, nothing daunted, I went for my catcher, and with heroic confidence I raised the machine on high. But the swarm, for some inexplicable reason, did not deign to notice it. I raised it still higher; I held it at arm's length, still those unorthodox bees stubbornly refused to tumble into it. What could it mean? I paused to consider. I had confidence in my author; he said the thing would work, and I was bound to believe it.

After awhile I was aroused from my reflections by my neighbor across the street, calling to me and asking what I was trying to do there. I told him I was going to take down that swarm of bees. "Humph," said he, "pretty high up, aren't they? Look here, I have an extension ladder, better come and get it; I will help you; possibly by its aid you may be able to reach them."

"Reach them," I repeated to myself. Could it be possible *that* was the trouble? I stuck the end of the 20-foot pole in the ground and stepped to one side to take observations. Sure enough, the catcher did not *appear* to reach them. According to my view there appeared to be an interval of 25 feet or more between the catcher and the bees. Still I was not convinced. It is unwise to form opinions hastily. This might be another instance of "locality."

However, as a solution of the problem seemed hopeless at this time, and as I had some fears that the bees might become discouraged and fly away, I resolved to take my neighbor's advice and try the ladder. Accordingly I procured it. After drawing it out to its full length, and climbing on to a limb above it, I managed to reach the cluster with the catcher.

When all was over, I sat down to meditate, and, as a result, I finally came to the conclusion that it is impossible to reach a swarm of bees 50 feet from the ground with a 20-foot pole, simply. And, I also concluded that the man who wrote that article either never saw a tree over 25 feet high or else ignored the fact that trees do sometimes grow higher.

Now, I wish to say right here, that I think the Manum swarm-catcher is an excellent device, and worth all it costs; but it will not reach swarms in the tops of high trees. And, as to the entrance-guards previously referred to, I hardly know what I should do without them. They do not, by any means, take the place of the bee-keeper's watchful eye, but I find them a great help.

No one appreciates useful inventions more than I do.

All goes to show how easy it is to make misleading statements, and how necessary it is, for those who aspire to the position of teachers, to weigh carefully everything they say; to look all around the subject, or else admit their view is only a partial one, and must not be expected to apply to all conditions. It is only natural that beginners should look to experienced writers for reliable information. And this very fact is apt, for the time, to dwarf their own natural resources, thus adding to their perplexity, in case the instruction is inaccurate.

But I do not wish to be misunderstood as underrating the excellent literature we have on the subject of bee-keeping. On the contrary, I advise all who expect to be successful with bees to read it. We owe much to our able writers, but they should not forget that they also owe something to their readers. And I think we have reason to complain that they, too, often speak without due consideration.

To sum up, I would advise beginners in bee-keeping to get a good book on the subject, but do not expect it to be infallible. You will get much from it, but you must have practical experience.

Do not invest in more than two or three colonies at first. You will have enough to do to handle them properly the first season. Keep a record of every colony. You must know what is going on in each hive from day to day, if you expect to make a success of bee-keeping.

To writers on the subject, I would respectfully suggest that it might be better to give their experience only, and not carelessly repeat what others have as carelessly said, and thus help to hand down palpable errors, which, from necessity, must be very *confusing to beginners.*

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Likes Bee-Work—Bee-Stings for Rheumatism.

I think the Sisters department is splendid. I had no idea so many women were doing as I have done. I have taken care of bees for seven years, and now have 40 colonies. In some years I have better success than others, but I am never without honey. I work only for comb honey. I started to take honey off the middle of June, and have taken several hundred pounds since then. I got 20 cents for the first, but only get 12½ cents now. I never saw honey come in so fast. White clover was full of bloom. I will have several hundred pounds to sell. I have hived 39 swarms, and have traded swarms for hives.

I love to take care of my bees. All the help I have is from my girls, aged 14 and 10 years. I lost my only boy last January. My, how I miss him! He was such a help. It seems hard to do without him.

I live on a small farm, and have to rent the ground out. I do not receive much from it. I manage to get along with the help of the bees and chickens. I would like to hear from those who have tried to get the eggs to hatch in the hives. I did not have faith in it, although I would like ever so well to have an incubator, as I raise several hundred chickens every year, and the bees would be a cheap kind, if it worked all right.

I noticed, in the last Bee Journal, something about bee-stings for rheumatism. It was crippled up real badly last spring when I started to work with my bees, and I can say I feel it no more.

A lady from New York tells, on page 488, about how they used to take off the honey with the sulphur stick. I have heard my father tell about doing the same way.

I have written quite a good deal, and have not given any advice, nor asked any questions. There is lots for me to learn, and I find out something new quite often.

I think that a cake of sugar candy put over the frames in the fall keeps the bees from having dysentery in the spring. I winter my bees on the summer stands, putting leaves in the super. I have had good success in wintering them in that way. I wish I had things as convenient as I see they have in some of the pictures of apiaries given in the American Bee Journal. I need a honey-house very badly, and would like to have as many more bees as I have. I hope some day to have them.

I think the editor will have to give us more room. I enjoy reading the paper, especially the Sisters department.

Page Co., Iowa, Aug. 4. Inez J. Henry.

A Sister's Encouraging Word.

My Dear Miss Wilson:—I will now do what I have often felt like doing—tell you how much I appreciate your department in the American Bee Journal. I think it is well conducted, and when I recommend a bee-paper to a sister bee-keeper, I always add to my warm approval of the American Bee Journal the fact that it has a department especially for women, conducted by a woman whose experience and ability is unquestioned. Such a recommend goes by this mail to Portland, Maine.

When I began bee-keeping, 19 years ago, Gleanings in Bee-Culture had a number of women correspondents, the best remembered being Mrs. Harrison, Mrs. Chaddock, and Mrs. Axtell. They were good, helpful writers, and I always felt an inspiration to go on with my work after reading their articles. Working entirely alone as I have always had to do, I did not have the comfort and pleasure of talking over my work with any one, so naturally the bee-papers were more to me than instructive—they were communications from friends with mutual interests, and I soon had my favorites, and felt as if I knew them; and, by the way, is not this one of the best things about conventions, that we meet these friends we have learned to admire?

I heartily wish you success, and a continuance of your work. S. M. Stow.

Cook Co., Ill., May 22.

Trouble with Swarms Deserting.

I had some trouble with my bees, and would like some information. In July they swarmed, and I hived them, but the following day they left the hive and settled on an old barrel. I hived them again, but there is not a third of a colony in the hive now. July 7, the old colony sent out another swarm, which I hived without a bit of trouble, but to-day I looked in the hive and found only a handful of bees. Both hives were clean, and I can not understand why they leave, as they were both *large* swarms. I am very sorry, for I am anxious to get a start in bees.

I enjoy reading the American Bee Journal, and want to try to get some of my neighbors to subscribe for it.

I shall be very glad to receive advice from some one who has had more experience than I have.

Cherokee Co., Kans., July 11. Anna Shupe.

Answer.—I think if you try giving them a frame of brood when you hive them you will have no further trouble. I never knew them to desert when given brood.

Maple Sugar and the Sugar Bush, by Prof. A. J. Cook; 44 pages; price, postpaid, 30 cents. This is by the same author as "The Bee-Keepers' Guide," and is most valuable to all who are interested in the product of our sugar-maples. No one who makes maple sugar or syrup should be without it. Order from the office of the American Bee Journal.

Amerikanische Bienenzucht, by Hans Buschbauer, is a bee-keeper's handbook of 138 pages, which is just what our German friends will want. It is fully illustrated, and neatly bound in cloth. Price, postpaid, $1.00; or with the American Bee Journal one year—both for $1.75. Address all orders to this office.

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

"NO END IN SIGHT" TO MANY QUESTIONS.

No end in sight to the subject of queen-rearing, says Mr. Alley. No end in sight to the silver question, says Mr. Bryan. No end in sight to the race question, says Mr. Washington. Good many things in the world not easy to get finished and filed away and ticketed. Page 440.

THE FOOL-PROOF FRAME.

Here's one —— "feller" who hardly knows how the fool-proof frame operates. To be impervious to the fool and keep him from getting into his hive might be one way —— Box-hive under a higher title. If, on the other hand, it keeps its manipulators from becoming fools, that's a more important thing. Must have it, some of us. Page 446.

HONEY-ADULTERATION DECREASING IN ILLINOIS.

It's cheerful and good speed in the right path for three years that they report in Illinois. Adulterated honey not easy to find now. Three years ago one-third of it was such. This is good of itself, and also good as a sermon. Those weak-hearted brethren elsewhere who always are saying, "You can't do anything about it," should listen to the sermon, and brace up to overthrow this evil and others. Page 452.

FEEDING GLUCOSE NOT A SUCCESS.

As to the naughtiness of feeding bees glucose to make them fill sections, I suppose we have most of us been declaring that to be an impossible sin. Still, it's pleasant to have such strong support as Inspector France brings us on page 453. He finds that even famished bees will not take such feed until it is made nearly half honey, and then only enough for present use.

GETTING BEES OFF COMBS—FORCED SWARMING.

Ah, Mr. C. Davenport is a hitter also in getting bees off from the combs. We have a tribe of the Hittites same as they had of old. Perhaps it's because we have seldom felt any *need* of anything beyond our own practice that has kept some of the rest of us from being hitters.

And forced swarming not likely to turn the bee-world upside down—is the prophecy of one of its chief prophets. —Page 453.

LETTING BEST CAPPERS DO THE CAPPING.

Yes, here's a new kink that can be practiced to some small extent, contributed by Miss Wilson. If you have bees that gather honey well but cap it so as to look abominably, also bees that cap well, something has been done in the line of making the latter do the capping for the former. Page 455.

RETURNING SWARMS.

I'm quite interested to see that Dr. Miller thinks that it's practical to return all swarms, prime and all, directly to the hive. I've done that way quite a bit, but only as a sort of dire extremity. More practical with few colonies than with many, I should say. Or, perhaps, many colonies and only a few actually swarming at any one time, would be the most hopeful; for then you'd expect to be on hand most of the time. You see, it takes so many operations, and the chances of escape become so numerous, that though generous of your time and labor you don't save the bees. If I ran 10 colonies that way, and had three of them actually unbroken at the end, I should think I had done tolerably well. Not that the seven have all sent bees to the woods, but they are not where they should be. Sometimes they will omit swarming for one day; but infrequently they'll try you twice in a day. And when they fly 20 minutes before doing anything with themselves, it takes one's time in big slices. Page 457.

THE OLD 4-PIECE A GOOD SECTION.

It would be a curious result if the 4-piece section should come back to us willy-nilly on account of the extermination of basswood. Could bear it without groaning, as the 4-piece section was a good section. Page 467.

CAN'T SWALLOW THE ONION THEORY.

Is it exactly the thing for a bee-journal to print without protest that the juice of a roasted onion on a sting has been known to save life? Say rather that it did no harm, possibly a trifle of good—and the person lived. Perhaps I'm hard on onions. My doctrine is that, like the boy's pins, they save thousands of lives. Same method—by not eating them. Page 468.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

After Effects of Too Many Bee-Stings.

On page 500, the following is copied from Gleanings in Bee-Culture:

"It behooves us all to be careful not to get any more stings than is absolutely necessary, for the effect of the accumulated poison may be serious in its effects in after years, as it was in the case of Langstroth and some others."

Now, I would like to know what were those after effects of which Mr. Root speaks.

When I began keeping bees, 13 years ago, a sting in one of my fingers would make my whole hand and arm swell, while now I can stand a dozen stings without much discomfort. I am working with my bees now without gloves, and have not tried particularly to avoid stings, as I have been desirous of becoming immune as much as possible; so if it should happen that I should get a large number of stings they would not affect me too much.

If there are possible effects, of which I had not heard before, then it would be better for me to be more careful to avoid stings than I have been.

It may be there are other bee-keepers who are as ignorant as I am of the after effects of bee-stings, and will be interested in your answer. Missouri.

Answer.—Mr. Langstroth was subject to fits of mental depression, when, for days, he would scarcely speak to any one, and didn't want to touch or even think of bees. My private opinion is, that bee-stings had nothing whatever to do with the case, and I don't believe you need feel unnecessarily alarmed. I've been accumulating stings for the past 42 years, and if the effect is ever to be serious it ought soon to be apparent. But except when I'm dead tired from overwork I'm yet about as cheerful a youth as you generally meet.

◆

Top and Bottom Section-Starters—Feeding for Winter.

1. Why do you use top and bottom starters? (See page 142 of your book). Would one that almost filled the section do just as well for home market? Time would be saved in cutting and putting in.

2. Will bees cap and finish supers any quicker if there are two on the hive instead of three? That is, if you had three on—two they had just started to cap, and one on top they had begun in? Now, if you take off the top one will they finish the others sooner?

3. Will bees put dark and light honey in the same cell? I have been told they would not. I mean, if they were working on white clover, and did not get enough to fill the cells, and buckwheat came on, would they put it on top of the clover honey?

4. In feeding for winter we are told (A B C of Bee-Culture) to find out how much the bees need, and feed them that amount of sugar and water. If I feed 20 pounds of sugar and water will it make 20 pounds of stores for winter? If a 10-frame hive were without any honey, how much sugar would it take to carry them through the winter?

5. I have one super that has a few cells of pollen in every section. What is the cause, and how can I prevent it?

6. Can a super (that is, on top of a hive) full of young bees be given to another colony without any fighting? Would it be a good idea to take from a strong one and give to a weak one?

7. How would it work to use the same depth of bottom-board under frames ($\frac{7}{8}$) in winter, and close the entrance down to $\frac{3}{8}$ inch by a strip of wood for out-door wintering? What size entrance would you use here? Massachusetts.

Answers.—1. Even for the home market I should prefer the bottom starter. It makes a nicer looking section. Unless a single starter comes down so far that it is likely to sag, some of the sections, especially when honey is coming in slowly, will not be built down to the bottom. Although the bottom starter is original with me, I don't believe I'm sufficiently prejudiced in its favor to stand the extra trouble unless there were a sufficient gain to pay for it.

2. Yes, if you take off that top one they will be likely to cap the other two sooner. But if honey is yielding, and there are bees enough to crowd the three, you may find bad work from crowding in the two. I had some experience in that line this year, having only three or four supers on when these were so nearly filled that the bees had not room enough (although an empty super was on top, but they don't get so

readily started on top as below), and they built burr-combs and built ou the separators, making waste, and injuring the appearance of the sections.

3. Don't trust them. They'll put whatever they get in any cell that is not full.

4. No; 20 pounds of sugar and water, half and half, wouldn't make 20 pounds of stores, only about 14. Count 10 pounds of sugar to equal about 14 pounds of honey, no matter how much water is used. Use about 22 pounds of sugar for the 10-frame colony.

5. That's one of the things I've never been able to find out, why one colony will have pollen in its sections when others exactly like it will have none. Shallow hives make a tendency to more pollen in sections, and if the queen lays in the super, that will make more pollen there, but there are still occasional cases which I don't know how to account for.

6. It can be safely done, but is not generally advisable.

7. It would be all right. Deeper than ⅞ would be still better for the bottom-board, but I would not care to have the entrance more than ⅜, and perhaps not more than 4 inches wide.

Don't be worried about troubling me with questions. Yours are so neatly and clearly given that it's a pleasure to answer them.

Queen Questions—Putting on Supers—Tobacco-Smoke.

1. Can queen-bees sting?
2. Do they always mate with a drone in the air?
3. If the virgin queen had her wings clipped would she be any good?
4. When is the best time to clip her wing?
5. Can workers lay?
6. Will the queen go up in the top part of the hive to lay?
7. When should top supers be put on?
8. Will the bees store honey above while there is room below?
9. Are the brood and honey put in different combs below?
10. Where will I find the brood when I want to divide a colony?
11. Will tobacco-smoke kill bees? NEBRASKA.

ANSWERS.—1. Yes, indeed, but they'll not sting *you*. One queen will sting another, and, as a very rare thing, a queen may sting a worker.

2. Yes.

3. No, unless so little were taken off the wing that she could still fly.

4. The first time it is convenient to get hold of her after she begins to lay. In the spring make a general going over to clip any that came from superseding the previous fall.

5. Not as a rule; but when a colony has been queenless a long time they may undertake the business, and then we have the pest called laying workers.

6. Sometimes.

7. When the harvest begins, or a little before it. Generally you will find bits of white wax on the top-bar and upper part of the combs at about the time to put on supers.

8. Generally not.

9. No.

10. In the brood-chamber.

11. No.

A book of instruction about bees would be worth to you many times its cost.

Building Up Weak Colonies—Removing Supers of Honey.

1. Advise me how to make a weak colony strong. Is it a good plan to put two swarms together?

2. What is the best way to take supers of honey from the hive? PENNSYLVANIA.

ANSWERS.—1. Early enough in the season there's no better plan than to let them build up and grow. Later they can be aided by frames of sealed brood from other colonies. It is also a good plan to unite two or more weak swarms, but it is better to prevent all swarms after the first.

2. To give full particulars as to the whole of taking off honey would go beyond the limits of this department, these being given in your book of instructions on bee-keeping; but if you will mention any particular point that is not clearly understood in your text-book, I'll be glad to answer in full.

Crating and Shipping Comb Honey—Keeping Ants Away from Honey.

1. Please give instructions how to crate and ship comb honey.

2. How do you keep ants from getting on it? IOWA.

ANSWERS.—1. When you get the shipping-cases that are now furnished by supply-dealers you will hardly need instructions for using them, for you can hardly case the sections wrong, they being so placed that one row comes directly against the glass so as to show the face of the honey. It is of first importance that this row next the glass be a fair sample of the whole case, for the man who veneers by putting next the glass the best, and inferior honey back of it, will in the long run be the loser by it.

Unless there be so large a quantity of honey that it can be fastened solid in the car, it should be put in the crates sold by some supply-dealers, the crates so placed that the *ends* of the sections shall be towards the front and rear, so as to stand the bumping of the cars. On the contrary, if the sections are hauled on a wagon, they should be placed crosswise.

2. While the honey is on the hives the bees will keep the ants away, but ants are sometimes very troublesome in the house. A small quantity of honey can be kept from them by having it placed on some kind of a platform with feet resting in cans or dishes kept filled with water or oil. That is not so convenient with large quantities, and aggressive rather than protective measures must be taken. Dishes may be set containing poison of some kind mixed in thinned honey. If you can trace them to their holes, pour gasoline or bisulphide of carbon into the holes, and cover up.

Uniting Colonies—Care of Combs.

I have 50 colonies of bees in dovetailed hives, and want to keep but 25, spring count. How and when can I double them up? What should I do with the frames of larvæ and honey? And how to keep the frames of comb during the winter? TENNESSEE.

ANSWER.—Better wait until next spring to unite. If you unite this fall, there may be some casualties in winter, and you would not then have your 25 in spring. Even if you are sure of no winter losses in your mild climate, there are advantages in waiting till spring. There will be no question about care of combs through the winter, and by doubling 50 full colonies in the spring you are likely to have 25 stronger colonies than if the doubling were done in the fall; and 25 very strong colonies will take no more care than 25 weaker ones, and will store more surplus.

If there are any points not made entirely clear in your book about uniting in spring, send on all the questions you like, and I will cheerfully answer them—if I can.

Extracting and then Feeding Sugar—Does Shaking a Queen Off the Comb Injure Her?

1. Will it pay to extract from the brood-chamber and feed sugar worth 5 cents a pound, when honey is worth 10 cents?

2. Can I depend upon getting most of what is fed stored in the combs?

3. Would it kill a young queen that just started to lay, to shake her off the comb on the ground? I think I stopped one from laying in that way. CANADA.

ANSWERS.—1. I don't know. In some cases it might, in others not.

2. I'm not sure that I get exactly the drift of your question. Of course, whatever is fed to the bees will be stored somewhere, with the exception of what the bees consume for their own use, and so it may be expected to be stored in the brood-chamber so long as there is room there. After cramming the brood-chamber, the bees would store any further surplus in the upper story, but, of course, you would not want sugar to be stored to sell as honey.

3. It is not likely that a queen would be at all injured by being shaken upon the ground from a comb held at the usual height. There may have been some other reason for the cessation of laying in the case you mentioned.

Queenless and Queen-Right Colony.

1. Will a queenless colony of bees carry in pollen in this State as late in the season as Aug. 17?

2. How can a person tell that bees are queenless if he can not look into the hive?

3. If a colony has a queen will there be brood and eggs in the comb at this time of year? MAINE.

ANSWERS.—1. A queenless colony *may* carry in pollen at any time in the season when pollen is to be found. But after they have been queenless for some time, they accumulate a surplus of pollen, and are then likely to carry in little or no pollen.

2. If you find a colony carrying in little or no pollen when others are carrying in big loads, you may suspect queenlessness; but the sure way is to look into the hive.

3. In your region you may expect queens to continue laying throughout September, but in some cases they may cease before the month has advanced much.

Does Returning Swarms Make Too Big Colonies for Wintering?

I am keeping bees for the first time, and consequently I have very much to learn about them. I started last spring with 2 colonies, and have increased to 7, besides getting 140 pounds of surplus already, with the bees still hard at it.

What I want to ask is this: If I keep returning the swarms that are coming off now to their parent hives, instead of establishing new colonies, as I am advised by several writers in the American Bee Journal, will not such parent colonies become so populous that the 8-frame dovetailed hive cannot contain enough honey in order to insure sufficient stores for them for winter? If so, what would be best to do? IOWA.

ANSWER.—No, you can never have more than the progeny of one queen in the hive, no matter how many times you return the swarm.

and those bees that you return will practically all die off before winter, so the number of bees in the hive in winter will be little affected by returning the swarms. All the same, it needs a sharp lookout, whether you return swarms or not, to see that bees in an 8-frame hive have plenty of stores for winter. Save up some frames of sealed honey to give needy colonies. If you don't need them this fall, you may be very glad of them next spring.

English Standard Brood-Frame.

What is the size of the English standard brood-frame? and how many frames to a standard hive? MAINE.

ANSWER.—14x8½, and 10 or 11 are usually used in a hive.

Keeping Comb Foundation—Vetch for Bees.

My questions may be foolish, but I am a foolish bee-keeper; I don't know much, but one thing I know is, that I have the bees and have to handle them. During the month of April we had a freeze that put my bees back, but they are coming out all right now. I have 9 colonies.

There are a few bee-keepers around here that use old boxes and logs for hives, but I can not make them hear when talking to them about subscribing for the American Bee Journal, or using good hives.

I am going to study "Forty Years Among the Bees."

1. If I order more foundation than I use, how can I keep it from spoiling?

2. Do I have to have tools that are made for the purpose of fastening it in?

3. What about vetch for bees? I enclose a few seeds. Should it be sowed with rye, or what would be best? MISSOURI.

ANSWERS.—1. I hardly know what you can do with it that it will not keep, unless you put it in an oven where it will melt, or spread it out in the sun and rain for a year. Just keep it covered up wherever it is convenient. Even if you have it filled into sections, keep them where they will be dry and nice, and they will be all right. Although bees take hold of fresh foundation a *little* more readily than that which has been kept over, there isn't much difference. But if you leave it on the hives in the fall, when no honey is coming in, it may become so bad that bees will not touch it next year.

2. It will probably pay you to get a foundation fastener, although you can get along without one.

3. I know nothing about it from personal experience. I thank you for the seed.

Returning Swarms.

Have I done right by my bees? I got tired of their swarming so much, so when the swarm came out I let them settle, and then went to the hive they came from and took all the queen-cells out, and took the swarm that was hanging on the tree and put it back in the old hive. That settled their swarming. Is there any danger of making them queenless? I do not clip my queens, as they are so hard to find. I keep from 50 to 70 colonies. WISCONSIN.

ANSWER.—You need not fear queenlessness, for the bees would not swarm without a queen, which would still be left when all cells were destroyed.

Adels ❋ HARD REGORD TO BEAT ❋ Adels

My father has an Adel colony that stored 75 pounds section honey. It cast a swarm that has filled nine 24-pound supers up to date—1903. **I am ready to back up this statement.**
F. R. KOZAK, Maquoketa, Iowa.

I got 210 1 pound sections from one Adel colony. Another has filled 8 supers, and I expect 2 more supers this year from same colony.
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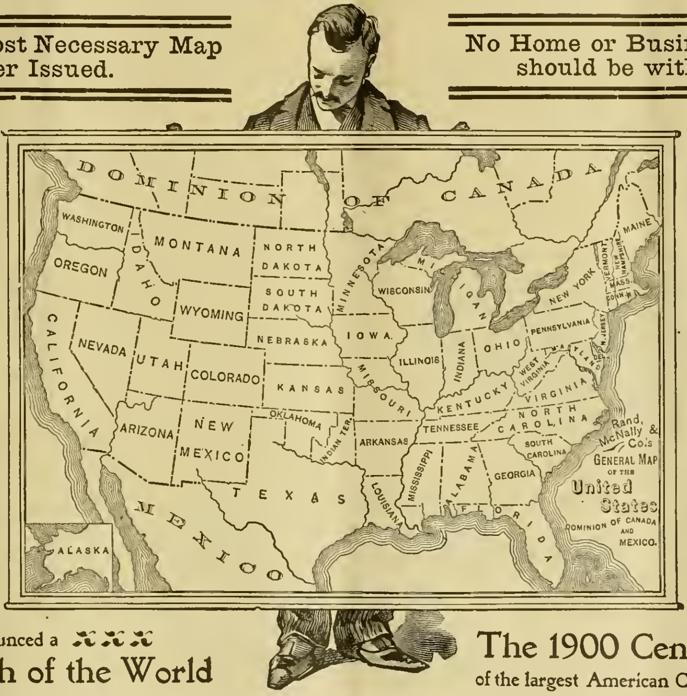
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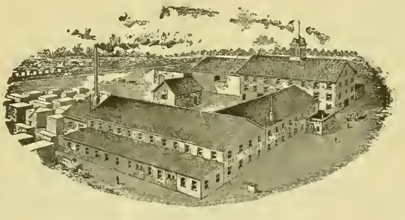

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Beedom Boiled Down

Bee-Stealing at Denver.

In the past Denver bee-keepers have been occasionally annoyed by the theft of a hive of bees or its stores, but never before, to my knowledge, has any one undertaken to make an extensive start in bee-keeping by wholesale stealing of bees. Such, however, was the plan adopted by John S. Hayes and wife, a newly married couple living in Denver.

Suspicion was first aroused by the fact that his apiary, which consisted of one colony about March 1, increased at the rate of one colony every Sunday morning, until he had eight. All these were in bright red hives of his own manufacture. At this stage he purchased a few weak colonies and a lot of empty hives, which he placed in his yard to represent colonies, and lo, the red hives went for kindling. Then he began to increase much faster. He had a hive to set the stolen bees into. The stolen hives and frames that could be identified by their owner made an excellent fire.

On Saturday, June 6, I discovered five colonies missing at my out-apiary—the best in the lot. I immediately thought I knew where my bees had gone, and I resolved to use a little strategy to prove the truth of my suspicions and at the same time apprehend the thieves. I at once saw the bee-inspector of Denver county, and arranged with him to inspect the suspected apiary early Monday morning. It was also arranged that after he got to work I would happen along on my wheel and drop in for a bee-chat, which I did, and the stratagem worked very nicely.

The woman had the audacity to ask me if I had had any bees stolen. I replied that I had seen mine the week before, and that they were all right at that time, which they were.

I could only identify one hive which stood on the stand. The inspector told them he had to inspect all hives and combs for foul brood, so we got to see all that were in sight. We had noticed a small room on the back of the lot, which was locked up.

The inspector asked, "What is in here?"

"Oh, there isn't anything pertaining to bees in there."

"Well," the inspector said, "open it, I want to see."

The man obeyed, and, behold, there were two of my hives, empty, along with a quantity of others. I made no claim to them, nor said anything in regard to what I had seen. I was just thinking how I could get a warrant before they got suspicious and burned up my evidence. I finally got a policeman to watch while I went for the warrant.

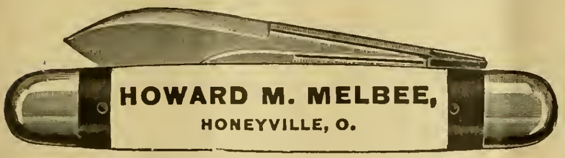
I had both man and wife arrested, and made them tell where the bees were that belonged in the two empty hives we found locked up. He had transferred them to his own hives, and he showed us which ones. The constable marked them as my property and let them set there, but nailed up the hive of bees that was standing outside, and took it and the empty hives right along to court with the prisoners.

While the policeman was watching them they thought something was going to happen. He took the ax and went to work with a will on hives and frames, and she carried the stuff in and fed the stove.

John Bouchenheimer, also, had them both arrested the same afternoon for stealing two colonies from him. They both gave bonds that evening, and went home and began putting things in better shape (for them). They moved five colonies away after dark, which were later located with a search warrant, and identified by a rancher who had only five colonies, and they were selfish enough to take them all. The ranchman finally got tired and dropped his suit. Others that lost one or two wouldn't prosecute them, for they said the time they would lose would be worth more than the bees. The accused appeared the next morning for trial and asked for a continuance until Thursday morning to prepare their defense, which was granted. The case

The Novelty Pocket=Knife.

Your Name and Address on one side--Three Bees on the other side.



[THIS CUT IS THE FULL SIZE OF THE KNIFE.]

Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the subscriber, and on the other side pictures of a Queen, Drone, and Worker, as shown here.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a last-time, with proper usage.

Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the "Novelty" is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the "Novelties," your POCKET-KNIFE will serve as an identifier; and in case of death, your relatives will at once be notified of the accident.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid for $1.25, or give it as a Premium to the one sending us THREE NEW SUBSCRIBERS to the Bee Journal (with $3.00.) We will club the Novelty Knife and the Bee Journal for one year, both for $1.90.

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Prompt shipping. FINE ITALIAN QUEENS
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If you are interested in Sheep in any way you cannot afford to be without the best Sheep Paper published in the United States.

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has a hobby which is the sheep-breeder and his industry, first, foremost and all the time. Are you interested? Write to-day.

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25 years the best.
Send for Circular.
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REMARKABLE The Universal Satisfaction our QUEENS do give...

STERLING, GA., June 29, 1903.

I was showing my father yesterday how my bees, which I bought from you, were out-working everything in my apiary. Send me 4 Buckeye Red Clover and 2 Muth Strain Golden Italians. I will order more after next extracting.
THOS. H. KINCADE.

Buckeye Strain Red Clover Queens. They roll in honey, while the ordinary starve.
Muth Strain Golden Italians—NONE SUPERIOR. ∴ **Carniolans**—NONE BETTER.

Untested, 75c each; 6 for	$ 4.00	Tested, $1.50 each; 6 for	$ 7.25
Select Untested, $1.00 each; 6 for	5.00	Select Tested, $2.50 each; 6 for	12.00

Best money can buy, $3.50 each.

Send for Catalog of **BEE-SUPPLIES**; complete line at manufacturer's prices.

The Fred W. Muth Co.,
Front and Walnut, - CINCINNATI, OHIO.

was called Thursday morning and I put in my prosecuting evidence.

I took in a hive which was a duplicate of the stolen ones (a Root Colorado portico), and showed my markings. Under the hand-hold was a number stenciled on which they had scraped and battered with a hammer, and then given a daub of paint and a new marking. But up under the top of the portico I had stenciled in inch letters F. H. H., which they evidently had not seen, for there it was and had been for three years. I also had the inspector for a witness, the constable as to the finding and where, the lady that lives on our ranch, where the bees were stolen from, showing that the prisoners were there looking the location over a few days before taking them, and some of the best bee-keepers we have as expert testimony as to the value of a picked number of colonies at that season.

They did not make any defense; did not go on the witness stand at all, but their attorney asked for a petit larceny charge. My attorneys asked to have them both bound over to the district court for grand larceny.

In my attorney's plea he said in part: "The fact that five colonies were stolen at the same time, although I could only identify three, showed without a doubt that they took five, and that it was unusual to find all the stolen property in a thief's possession when making a search." He said: "Look at them! They show plainly what they are. They won't work for a living like honest people, but steal they will. But if stealing be their bent, why, O why, will they steal the busy bee?"

The justice took it under advisement for two days and then decided to discharge the wife and bind the husband over for grand larceny. The wife had an equity in some property where she lived, so she was accepted as bondsman for her husband's appearance.

I then got back the three colonies that I had identified.

Aside from this, they were both under $100 bonds on the Bouchenheimer charge. That case was called soon after, but they did not appear for trial, so the court declared the bond forfeited.

The district called my case for trial and they did not appear there, either, so that bond was declared forfeited, too.

As near as I can find out they did not have much reputation to lose, but what little they might have had is gone, the bees are gone, their equity in a home is gone, and they are fugitives from justice. Verily the way of the transgressor is hard.

Now, just a word as to organization, both local and national. It is pretty generally known that Colorado bee-keepers have a pretty strong State Association, and we also have the Denver Bee-Keepers' Association, which is pretty strong, too. They stand together for the right and the protection of their interests. The encouragement it gives one to be backed by such a body of brother bee-keepers is worth many times the cost; besides, it was remarked a number of times that the effect of such a representation of interested bee-keepers certainly would have considerable influence with any judge. The court-room was packed every day with Denver bee-keepers, all interested and eager for justice to be meted out to very guilty persons. What can be accomplished locally by organization can more than be realized nationally.—F. H. HUNT, in Rocky Mountain Bee Journal.

850,000 GRAPE VINES

100 Varieties. Also **Small Fruits, Trees, &c.** Best rooted stock. Genuine, cheap. 2 sample vines mailed for 10c. Descriptive price-list free. **Lewis Roesch, Fredonia, N.Y.**

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to meet those who work for us. Cow keepers always have money. We start you in business. You make large profits. Easy work. We furnish capital. Send 10 cents for full line of samples and particulars.
DRAPER PUBLISHING CO., Chicago, Ills.

Wanted Your address on a postal for a little book on QUEEN-REARING—**SENT FREE.** ADEL QUEENS A SPECIALTY.
Address, **HENRY ALLEY,**
35Atf **WENHAM, MASS.**

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FROM MANY FIELDS

Best Season in 25 Years.

My bees are doing well this year. This is the best season we have had here in 25 years. I have 11 colonies, all strong and working finely. They are badly mixed, no full-bloods. I have not had one natural swarm this summer. I forced one, and that is all the increase I have had so far, and do not want any more swarming this year. J. L. BADER.

Coffey Co., Kans., Aug. 18.

Bad Weather for Honey.

The weather here has been so bad that our honey crop is a failure. The bees are getting some honey now from buckwheat, so we hope to get along without feeding very much sugar. J. I. CLARK.

Addison Co., Vt., Aug. 24.

A Good Record.

This has been the best season here for white honey for many years. I have taken from one to four supers of honey from all my colonies, and from one double swarm 183 pounds of comb honey. Bees are doing well at this date.

I think I have one experience that makes a new record.

On June 5, I received a 3-frame nucleus with queen. I put it in a 10-frame hive on old comb. On June 25, I found the hive filled. I gave them room by a super of 28 sections, and they went right to work in them. July 4 they cast a good swarm, which I hived on drawn comb. They have the hive well filled at this date. So I have no reason to complain of my red-clover queen. JOHN CLINE.

LaFayette Co., Wis., Aug. 28.

Plenty of Fall Flowers.

The bees are working nicely on the fall flow. I got about a ton of white honey. I have had less trouble this year than usual in loss of queens while mating. Bees are all in fine condition to gather nectar, if there will be a good flow. There are plenty of fall flowers, and I hope it will not get so hot as to dry them up. D. C. McLEOD.

Kendall Co., Ill., Aug. 24.

Cellar-Wintering of Bees.

My book shows that I stored 36 colonies of bees in the cellar Dec. 3, 1902, counting 6 three-frame nuclei as colonies. It is a large root-cellar built under the entrance or driveway into the barn. The temperature of cellar was 38 degrees, and the ground was covered with snow. I have the Langstroth-Simplicity hive, with loose bottoms. All hives are placed on rims 2 inches deep, with wire-screens so the bees were entirely confined all winter, running from 34 degrees to 38 degrees, but stood at 36 degrees the most of the time. The ventilation was a common stove-pipe running up through the roof, which was closed most of the time. The cellar was quite dry, and the bees real quiet up to March 19.

The same book shows that I put the bees out March 19, 20 and 22, 1903, all living, except two of the weakest nuclei were dead. The bees in a fair to poor condition, each colony having a very great percent of dead bees, due, I presume, to the low temperature in the cellar, causing a heavy consumption of honey, which, in turn, increased the death-rate.

I have increased to 64 colonies, with 3000 pounds of choice honey up to date, capped snow white, and good enough to take to the World's Fair.

I would just as soon think of farming 160 acres in small grain without a grain-binder as to attempt to manage 6 colonies of bees without reading an up-to-date bee-paper like the "old reliable" American Bee Journal. May it live long with a largely increased field of usefulness. J. W. JOHNSON.

Stephenson Co., Ill., Aug. 17.

A Good Report.

I had a good crop of honey this year, 60 gallons of extracted and 300 pounds of comb honey from 15 colonies, spring count, and increased to 42 colonies, with hives now full of honey, and good prospects for a fall crop. I have a good home market, and can sell it as fast as I take it from the hives.

D. E. ANDREWS.

Monroe Co., Ind., Aug. 24.

Shagbark Hickory Bark for Smoker-Fuel.

It may be worth while to inform your readers that the loose, dead bark of the shagbark hickory makes excellent smoker-fuel. I have used it the entire season, and find it more satisfactory than anything else I have ever tried. When well lighted it gives abundance of smoke, will not go out, is very lasting, and makes no sooty drip. R. L. TAYLOR.

Lapeer Co., Mich.

Honey-Flow Keeps Up.

The honey-flow keeps up, and we look for quite a fair yield of honey in spite of it being a backward season. Some of my colonies have filled 5 supers, but others have not done so well.

The price of honey started here at 10 cents to 12½ cents for comb, and 7 cents for extracted. W. J. MARTIN.

Otero Co., Colo., Aug. 13.

Results of the Season.

The bees have been doing very well in old Chautauqua County this season. I put 68 colonies into winter quarters, and came through the winter with 61 colonies good and strong. I winter them on summer stands. I will get about 50 pounds of nice, white comb honey per colony. EDWIN WARD.

Chautauqua Co., N. Y., Aug. 18.

Poorest Season in Years.

We have had the poorest season here that has been known for a good many years. It has been so very cold since early last spring that it has been impossible for the bees to fly much, only for a day or two at a time, except a part of June, and then it was so very dry, and the nights were so cold that the clover did not amount to much; and when basswood came on it was cold, bad weather again, so the bees stored but little from that

Long Tongues Valuable
South as well as North.

How Moore's strain of Italians roll in the honey down in Texas.

HUTTO, TEX., Nov. 19, 1902.

J. P. MOORE.—Dear Sir:—I wish to write you in regard to queens purchased of you. I could have written sooner, but I wanted to test them thoroughly and see if they had those remarkable qualities of a three-banded Italian bee. I must confess to you I am more surprised every day as I watch them. They simply "roll the honey in." It seems that they get honey where others are idle or trying to rob; and for gentleness of handling, I have never seen the like. Friend E. R. Root was right when he said your bees have the longest tongues; for they get honey where others fail. I will express my thanks for such queens. I am more than pleased. I will stock my out-apiaries next spring with your queens.

Yours truly, HENRY SCHMIDT.

The above is pretty strong evidence that red clover is not the only plant which requires long-tongue bees to secure the greatest quantity of nectar.

Daughters of my 23-100 breeder, the prize-winner, and other choice breeders: Untested, 75 cents each; six, $4 00; dozen, $7.50. Select untested, $1.00 each; six, $5.00; dozen, $9.00. Safe arrival and satisfaction guaranteed. Circular free. I am filling all orders by return mail, and shall probably be able to do so till the close of the season.

J. P. Moore, L. Box 1, Morgan, Ky.
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$300,000,000.00 A YEAR and you may have part of it if you work for us. Uncle Sam's poultry product pays that sum. Send 10c for samples and particulars. We furnish capital to start you in business. Draper Publishing Co., Chicago, Ill.
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For Sale For want of time to attend—will sell my BEES at the very low prices following. Good Italian Blood. Strong colonies in 10-frame Langstroth Simplicity and Dovetailed Hives, with honey for winter. All perfectly healthy and excellent condition. Price per single hive, $4; 5, at $3.50; 10, at $3.25; 20 or over, at $3. F.O.B. here, cash with order. Reference: State Bank of Evanston. E. E. STARKEY, 1126 Benson Ave., Evanston, Ill.
37Atf Please mention the Bee Journal.

Italian Queens,
Bees and Nuclei.

We have a strain of bees bred specially for honey-gathering and longevity, at the following prices:

One Untested Queen.....$ .60
One Tested Queen .... .80
One Select Tested Queen. 1.00
One Breeder Queen 1.50
One-Comb Nucleus (no Queen).................. 1.00

These prices are for the remainder of the season.
Queens sent by return mail.
Safe arrival guaranteed. For price on Doz. lots send for Catalog. J. L. STRONG,
16Atf 204 E. Logan St., CLARINDA, IOWA
Please mention Bee Journal when writing

WE INVITE all readers of the AMERICAN BEE JOURNAL who seek a college for themselves or friends to investigate

Mount Union College

Our motto in all departments is "Maximum efficiency at minimum cost."

Our scholastic training is equal to the best, our reputation first-class. All expenses for a year, aside from the clothing and traveling, less than $200.00. Co-education, health conditions, moral and religious influence, superior.
Send for catalog.

MOUNT UNION COLLEGE,
Alliance, Ohio.

source. Since basswood stopped blooming there has been nothing, excepting the last few days some fall flowers, and the bees are slowly bringing in nectar. There are various fall flowers that grow in abundance in this locality, and unless we have a decided change very soon (and there is no prospect of it) we shall have to feed quite heavily to prepare them for the long winter that is before them.

We have an abundance of early spring pasture, so that all the feed they will require is what they consume during the winter, providing we can have good weather in the spring. A. T. DOCKHAM.

Todd Co., Minn., Aug. 27.

A Good Honey Crop.

The honey crop is good in this county. I wintered 20 colonies in the cellar, and did not lose one; they were all strong in the spring. I increased to 65, and have taken off 2000 pounds of clover and basswood honey.

FRED E. GRAHAM.

Wood Co., Wis., Aug. 24.

First Year With Bees.

This is my first year keeping bees. I bought 5 colonies and brought them to my place last spring; I now have 15 colonies, and they are doing well. One colony swarmed and filled a 12-frame brood-chamber, and I put on 18 sections, and will take them off filled on July 30. I think that is doing well for one colony. That same colony cut a place through an inch board to get into the hive, but we did not know but what there was plenty of room for them. As soon as I found they had cut the hole through I fixed them all right, but the place they cut is still there. That is the first I knew that bees were "wood-choppers." I like to work with my bees; they are Italians. O. D. EDWARDS.

Cooper Co., Mo., July 28.

Close Saturdays a 1 p.m.—Our customers and friends will kindly remember that beginning with July 1, for three months we will close our office and bee-supply store at 1 p.m. on Saturdays. This is our usual custom. Nearly all other firms here begin the Saturday afternoon closing with May 1st, but we keep open two months later on account of the local bee-keepers who find it more convenient to call Saturday afternoons for bee-supplies.

SWEET CLOVER

And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5℔	10℔	25℔	50℔
Sweet Clover (white)....	$ .75	$1.40	$3.25	$6.00
Sweet Clover (yellow)....	.90	1.70	4.00	7.50
Alsike Clover	1.00	1.80	4.25	8.00
White Clover	1.50	2.80	6.50	12.50
Alfalfa Clover	1.00	1.80	4.25	8.00

Prices subject to market changes.

Single pound 5 cents more than the 5-pound rate, and 10 cents extra for postage and sack.

Add 25 cents to your order, for cartage, if wanted by freight, or 10 cents per pound if wanted by mail.

GEORGE W. YORK & CO.
144 & 146 Erie Street, - CHICAGO, ILL.

Please mention Bee Journal when writing advertisers.

CONVENTION NOTICE.

Ohio.—The first annual meeting of the Hamilton County (Ohio) Bee-Keepers' Association, will be held in room 1, Grand Hotel, Fourth St., Cincinnati, on Monday evening, Sept. 14, 1903, at 7:30 o'clock.

The annual election of officers for the ensuing year will take place, and the reports of the secretary and treasurer will be submitted.

Interesting addresses will be given on organization and modern bee-keeping, by expert bee-keepers, and a discussion of subjects pertaining to the general welfare of the society,

Reports on the production of honey in various localities are expected to be furnished, and members are requested to bring specimens of comb and extracted honey for mutual exhibition at the meeting.

Several interesting specimens of foul brood will be shown, for the information of those present.

The executive committee would urge that it is the duty of bee-keepers, in this and adjoining counties, to become members of this Association, as it is only by means of a strong central organization that legislation in their interests and the further fostering of the industry can be accomplished, such as has lately been enacted in Illinois and many other States in the Union.

The annual dues are only 50 cents a year; each member is entitled to a copy of our new pamphlet, just published, entitled, "Instructions for the Successful Treatment of Foul Brood, as Adopted by this Society."

In the event of your inability to be present, you can have your name enrolled by sending your dues by mail to the Secretary, which will be duly acknowledged, and pamphlet forwarded.

The presence of ladies, either as members or as visitors, is respectfully solicited by the executive committee.

Silverton, Ohio. WM. J. GILLILAND, Sec.

FREE as a.... Premium

A Foster Stylographic PEN....

This pen consists of a **hard rubber** holder, tapering to a **round point**, and writes as smoothly as a lead-pencil. The **point** and **needle** of the pen are made of **platina**, alloyed with **iridium**—substances of great durability which are not affected by the action of any kind of ink.

They hold sufficient ink to write 10,000 words, and **do not leak or blot.**

As they make a line of **uniform width** at all times they are **unequaled for ruling purposes.**

Pens are furnished in neat paper boxes. Each pen is accompanied with full directions, filler and cleaner.

BEST MANIFOLDING PEN ON THE MARKET.

19,000 Postmasters use this kind of a pen. The Editor of the American Bee Journal uses the "Foster." You should have one also.

How to Get a "Foster" FREE.

Send TWO NEW SUBSCRIBERS to the American Bee Journal for one year, with $2.00; or send $1.90 for the Pen and your own subscription to the American Bee Journal for one year; or, for $1.00 we will mail the pen alone. Address,

(Exact size of the Pen.)

GEORGE W. YORK & CO.
144 & 146 Erie St., Chicago, Ill

HONEY AND BEESWAX

MARKET QUOTATIONS

CHICAGO, Aug 7.—Consignments of the new crop are coming to commission houses that have not had honey for years past, and as there is not any consumptive demand they are finding difficulty in disposing of it. Under such conditions it is hardly possible to give accurate prices, as some merchants ask 10 cents for honey that others hold at 15 cents. The prices given in our last quotations are asked, but feeling is unsettled. Beeswax steady at 30c.
R. A. BURNETT & CO.

KANSAS CITY, Aug. 25.—Receipts of comb honey more liberal; demand improving. We quote fancy white comb, 24 section case, $3.25; No. 1, white amber comb, 24-section case, $3 00; No. 2, white amber comb, 24-section case, $2.75; Extracted, white, per lb., 6½c; amber, 5½@6c. Beeswax, 25@30c. C. C. CLEMONS & CO.

ALBANY, N.Y., Sept. 4.—Demand for honey improving, at 15@16c for fancy white comb; 14@15c for No. 1; 13@14c for No. 2. Production of honey in this vicinity is very light. This market will have to depend on other sections more this season than ever. Extracted honey, 7@7½c for white; 6@6½c for mixed and buckwheat. Beeswax, 28@30c. H. R. WRIGHT.

CINCINNATI, Aug. 6—The supply about equals the demand for extracted honey. We are selling amber extracted in barrels from 5½@6½c, according to quality. White clover, barrels and cans, 7@8½c, respectively. Comb honey, fancy, in no-drip shipping cases, 16@16½ cents. Beeswax, 30c. THE FRED W. MUTH CO.

NEW YORK, July 8.—Some new crop comb honey now arriving from Florida and the South, and fancy stock is in fair demand at 14c per pound, and 12@13c for No. 1, with no demand whatever for dark grades.

The market on extracted honey is in a very unsettled condition, with prices ranging from 5@5½c for light amber, 5½@6½c for white, and the common Southern at from 50@55c per gallon. Beeswax steady at from 30@31c.
HILDRETH & SEGELKEN.

CINCINNATI, Aug. 8.—New honey is now offered very freely, particularly extracted. The demand for honey is about as usual at this time of the season. I made sales at the following figures: Amber, 5@5½c; water-white alfalfa, 6½c; fancy white clover honey, 7@7½c. Comb honey, fancy water-white, brings from 14@15c. Beeswax, 27@30c. C. H. W. WEBER.

SAN FRANCISCO, July 22.—White comb honey, 11½@13½c; amber, 8@10c. Extracted, white, 5¼@5 c; light amber, 4¾@5c; amber, 4¼@4½c; dark, 3¾@4¼c. Beeswax, good to choice, light, 27½@29c; dark, 25@26c.

This season's crop is not only unusually late, but is proving much lighter than was generally expected. While the market is unfavorable to buyers, the demand at extreme current rates is not brisk and is mainly on local account.

WANTED! FANCY COMB HONEY
In no-drip shipping-cases. Also Amber Extracted in barrels or cans. Quote your best price delivered Cincinnati. The Fred W. Muth Co.
32Atf Front and Walnut, CINCINNATI, OHIO.

WANTED—Comb Honey in quantity lots. We are perhaps the only dealers in this article owning as much as 150,000 pounds at one time. Please state quantity, quality and price asked for your offerings, Thos. C. Stanley & Son,
24Atf MANZANOLA, COLO., or FAIRFIELD, ILL.

WANTED—Extracted Honey.
Mail sample and state lowest price delivered Cincinnati. Will buy FANCY WHITE COMB HONEY, any quantity, but must be put up in no-drip shipping-cases.
C. H. W. WEBER,
2146-48 Central Ave., CINCINNATI, OHIO.
24Atf Please mention the Bee Journal.

WANTED!
TO BUY—White Clover Comb and Extracted HONEY—also Beeswax. Spot cash. Address at once, C. M. SCOTT & CO.
33Atf 1004 E. WASH. ST., INDIANAPOLIS, IND.

Please mention Bee Journal when writing advertisers.

The Best Bee-Goods in the World....

are no better than those we make, and the chances are that they are not so good. If you buy of us **you will not be disappointed. We are undersold by no one.** Send for new catalog and price-list and free copy of THE AMERICAN BEE-KEEPER; in its thirteenth year; 50 cents a year; especially for beginners.

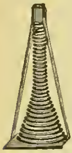
—THE—

W. T. Falconer Mfg. Co.,
JAMESTOWN, N. Y.

W. M. GERRISH, Epping, N.H., carries a full line of our goods at catalog prices. Order of him and save the freight.

Please mention Bee Journal when writing.

Queen-Clipping Device Free!



The MONETTE Queen-Clipping Device is a fine thing for use in catching and clipping Queens' wings. It is used by many bee-keepers. Full printed directions sent with each one. We mail it for 25 cents; or will send it **FREE** as a premium for sending us **One** New subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device. Address,

GEORGE W. YORK & CO.,
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INVESTMENTS
—IN—
SOUTHERN LANDS.

Such investments are not speculative. The South is not a new country. Market and shipping facilities are adequate and first-class. The climate is mild and favorable. Notwithstanding these and other advantages, Southern lands are selling for prices far below their real value, and at present prices net large returns on the investment. For a free set of circulars, Nos. 1 to 10, inclusive, concerning the possibilities of lands in Kentucky, West Tennessee, Mississippi and Louisiana, on and near the Illinois Central Railroad, for homeseekers and investors, address the undersigned,

A. H. HANSON, G. P. A., Chicago.
26A12t Please mention the Bee Journal.

I ARISE

To say to the readers of the BEE JOURNAL that

DOOLITTLE...

is now up with orders, so he can send Queens from his choice honey-gathering stock, by return mail, at the following prices:

1 Untested Queen	$1.00
3 Untested Queens	2.25
1 Tested Queen	1.25
3 Tested Queens	3.00
1 select tested queen	1.50
3 " " Queens	4.00
Extra selected breeding, the **very best**	5.00

Circular free, giving particulars regarding each class of Queens, conditions, etc. Address,

G. M. DOOLITTLE,
29Dtf Borodino, Onondaga Co., N. Y.
Please mention Bee Journal when writing.

26th Year Dadant's Foundation 26th Year

We guarantee Satisfaction. What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS. PATENT WEED-PROCESS SHEETING.

Why does it sell so well? Because it has always given better satisfaction than any other. Because in 25 years there have not been any complaints, but thousands of compliments.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

Bee-Keepers' Supplies OF ALL KINDS *****

Very fine pure-bred **BARRED PLYMOUTH ROCK** Chickens and Eggs for sale **at very low prices.**

Langstroth on the Honey-Bee—Revised,
The classic in Bee-Culture—Price, $1.20, by mail.

BEESWAX WANTED at all times.

DADANT & SON,
Hamilton, Hancock Co., Ill

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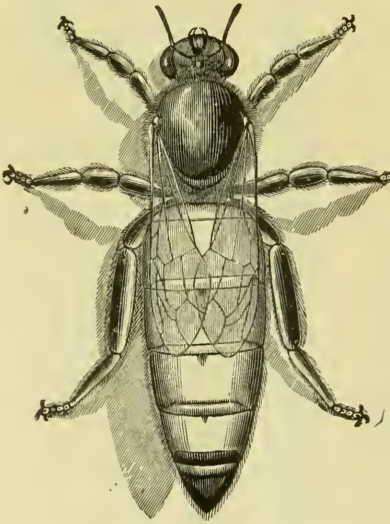
RED CLOVER HONEY-QUEENS.



SPRING BLUFF, WIS., July 18, 1903.
THE A. I. ROOT CO., Medina, Ohio.

Dear Sirs:—I thought I would write you a few lines in regard to the Red Clover Queen I got from you. They haven't swarmed yet this summer, but I have taken 48 sections from them and there is 24 more all ready to come off.

Just think, 72 nice sections of as nice honey as ever was made, and only July 18th. It seems as though they will surely fill 48 more.

I don't know whether their tongues are any longer than any of the others, or whether they gathered it from Red Clover, but surely such bees are worth money.

I use the 8-frame Jumbo frame.

C. E. KELLOGG.

C. E. KELLOGG, Spring Bluff, Wis.

Dear Sir.—We have yours of July 18th and would be glad to have you advise us by return mail with reference to the capping of the honey. Some parties say the capping from these bees is not white, and we would be glad to have you advise us how your honey is in this respect, and oblige, Yours truly,

THE A. I. ROOT CO.

SPRING BLUFF, WIS., July 31, 1903.
THE A. I. ROOT CO., Medina, Ohio.

Dear Sirs:—Yours of July 24th at hand to-day. In regard to your question in reference to the cappings of the honey from these bees I will say that it is simply perfect, beautiful snow-white and every box perfect. 96 one-pound sections now. I am quite sure they will fill two more supers, which will bring the number up to 144. I would like very much to have you see a few of those sections, and I will be glad to send you a few.

Now, I haven't told you ALL their good qualities yet. I am sure they are by far the most gentle bees to handle I have. I could take off the sections without smoke or veil without getting stung. There are a few traits about them that seem to me are quite remarkable aside from their honey-gathering; they don't seem to want to swarm.

I will write you again in a few weeks and let you know if they fill the 144 sections, which I am sure they will. Respectfully, C. E. KELLOGG.

AGAIN READY FOR PROMPT DELIVERY.

We were snowed under with orders for a few weeks, but here we are agai with good Queens and prompt service.

Red Clover and Honey Queens.

	Each.	Six.
Untested	$1.00	$ 5.70
Tested	2.00	11.40
Select Tested	3.00	17.10

Breeding	$5.00
Select Breeding	7.50
Extra Select Breeding	10.00

With any of the last three we include one frame of bees and brood to insure safe arrival, for which we make no charge. These must be sent by express. Queen circular free.

THE A. I. ROOT CO., Medina, Ohio.

AMERICAN BEE JOURNAL

43d Year. CHICAGO, ILL., SEPT. 17, 1903. No. 38.

WEEKLY

GEO. W. BRODBECK,
Secretary-elect of the National Bee-Keepers' Association.

THE AMERICAN BEE JOURNAL

PUBLISHED WEEKLY BY
GEORGE W. YORK & COMPANY
144 & 146 E. Erie St., Chicago, Ill.

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EDITOR,
GEORGE W. YORK.

DEPT. EDITORS,
Dr. C. C. Miller, E. E. Hasty, Emma M. Wilson

IMPORTANT NOTICES.

The Subscription Price of this Journal is $1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

The Wrapper-Label Date of this paper indicates the end of the month to which your subscription is paid. For instance, "dec03" on your label shows that it is paid to the end of December, 1903.

Subscription Receipts.—We do not send a receipt for money sent us to pay subscription, but change the date on your wrapper-label, which shows you that the money has been received and credited.

Advertising Rates will be given upon application.

National Bee-Keepers' Association

Objects of the Association:

1st.—To promote the interests of its members.
2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

ANNUAL MEMBERSHIP, $1.00.
Send dues to Treasurer.

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Vice-President—J. U. Harris, Grand Junction, Colo.
Secretary—George W. York, 144 & 146 E. Erie St., Chicago, Ill.
General Manager and Treasurer—N. E. France, Platteville, Wis.

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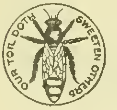
☞ If more convenient, Dues may be sent to the Secretary, at the office of the American Bee Journal.

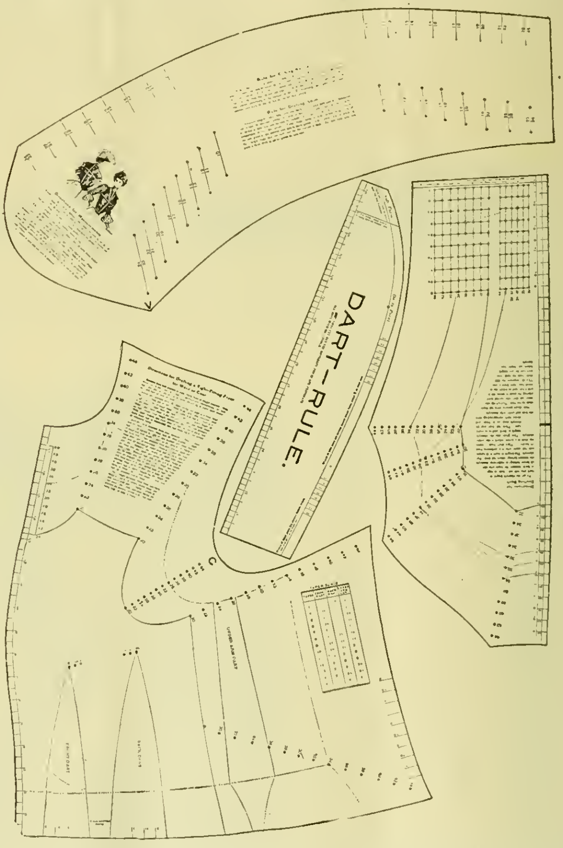
A Celluloid Queen-Button is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-lapel. It often serves to introduce the subject of honey, and frequently leads to a sale.


OUR TOIL DOTH SWEETEN OTHERS

The picture shown herewith is a reproduction of a motto queen-button that we are furnishing to bee-keepers. It has a pin on the underside to fasten it. Price, by mail, 6 cents; two for 10c; or 6 for 25 cents. Send all orders to the office of the American Bee Journal.

Something FOR OUR Bee-Keeping Sisters in the Winter Time.

We think all ladies will agree with us in saying that every man should at least understand some business, with which, in case of necessity, he could support himself and family. The wealthiest people frequently come to want, and wretched, indeed, is the man who cannot earn a living after his wealth is gone. He sometimes fills the grave of a suicide. And why, in this enlightened age of progression, should not woman, as well as man, be able to depend on her own resources? In case her husband dies in poverty, must she starve or depend on charity? In case her husband fails to provide and grossly mistreats the woman he has sworn to cherish, must she humbly submit? **A THOUSAND TIMES, NO!** Let every woman, before she marries, have some knowledge that can be used to make her a living. Every mother, rich or poor, should make her daughters, in a certain degree, independent, by giving them some kind of a trade, and teaching them to be self-reliant. Mothers should have their daughters learn to sew, and not neglect this important part of their domestic education. The daughter so taught will not only make a better wife and mother, but will also be more likely to secure a better husband, and will always command his respect. He will not look upon her as a helpless "know-nothing," but will know that if he fails in his duties, she can live without him, and this can only strengthen the bond between them. A thorough knowledge of dress-making can always be turned into gold, and become the means of support for the mother and her little ones. She may never have to use this knowledge in this way, but she has a trade and can use it if necessary.



The outline cut shown herewith is a condensed copy of **THE NEW LONDON LADIES' TAILOR SYSTEM** for drafting and cutting ladies' and children's garments. For simplicity and accuracy it has no superior among the more expensive systems. Thousands of girls have learned more about drafting and cutting with this system than they knew about it after serving their apprenticeship in some of the dressmaking shops of the United States and Canada. Thousands of the best garment cutters have laid their complicated and expensive system aside, and are now using **THE NEW LONDON TAILOR SYSTEM.** Thousands have been sold at $5.00 each, but we mail it **Free** to a paid-in-advance subscriber to the American Bee Journal for sending us **two new** subscribers at $1.00 each; or we will send it to any one with a year's subscription to the American Bee Journal, both for $1.75; or, we will mail the Tailor System alone for $1.00. Address all orders to

GEORGE W. YORK & CO.,
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AMERICAN
ESTABLISHT IN 1861
THE OLDEST BEE-PAPER IN AMERICA
BEE JOURNAL

43d YEAR. CHICAGO, ILL., SEPT. 17, 1903. No. 38.

Editorial Comments

Marketing the Honey Crop will be next in order. The tendency will be to rush it all off to the city. Don't do it. Do your best to sell nearer home.

Some bee-keepers seem to get scared if they have a thousand pounds or so of honey on hand. They think if they don't sell it within a month or two after taken off the hives they might have to carry it over winter, or perhaps be compelled to sit down and eat it all in their own family.

It is a great mistake to rush it off to the market, when, perhaps, a lot more have done the same way, and thus have shattered the prices.

In a wholesale way, the best comb honey should never sell for less than 15 cents a pound; and the best extracted should bring from 7 to 8 cents. Of course, in a season like the past, when there seems to have been a pretty fair crop, it may be necessary to shade prices a little. But don't do it unless you have a good reason for so doing.

Queen-Cages Smashed in the Mails.—We have had several instances where queens sent through the mails have been lost by reason of the cages becoming smashed. It seems in throwing the mail-sacks off the trains, books or other heavy articles come down on the cage edgewise, and of course it is crushed.

It seems to us the cages might be made a little stronger—left a little thicker by not boring out so much of the wood, which would leave a little stronger bottom to the cage, and thus prevent such easy crushing.

We suppose all queen-breeders have often been troubled in the same way. It certainly is very annoying, both to dealer and customer, to say nothing of the loss of the queens that have to be replaced.

Formalin and Formaldehyde.—The present possibility, if not probability, is that formalin, or formaldehyde, will be used to a considerable extent by bee-keepers. It certainly will if the claim is substantiated that thereby the combs of a foul-broody colony can be disinfected so as to kill both bacilli and spores, making it perfectly safe to use such combs in healthy colonies. It is, therefore, of some consequence that the readers of this journal be informed as to the best and most economical form in which to use the drug. So far, the advice given in these columns has been plainly in the direction of using formalin, that name being copyrighted and applied alone to the drug as prepared by a single firm. For some time it was difficult to get any information regarding the drug, and when such information was obtained through those who enjoy a monopoly of the term "formalin," it was placed in good faith before the readers of the American Bee Journal, notwithstanding the fact that it was a free advertisement.

There have been, however, intimations from more than one quarter that the information given in these columns was somewhat misleading, and now comes a letter from A. Richter, a pharmacist of New York State, who is also a bee-keeper, which is outspoken on the subject, and which bears evidence on its face that it comes from one who knows what he is talking about. Mr. Richter is entitled to hearty thanks for his letter, which is as follows:

EDITOR AMERICAN BEE JOURNAL:—I should like to correct you on the article on Formalin. Formaldehyde can be purchased for 17 cents per pound. Formalin—a trade name—the product no better, but costs 45 cents a pound. Our business is full of these licensed ways of robbing, and I am sure it looks bad for a paper like yours to help along Shirring & Gatz, who know both to be the same—but charge more to pay for the advertising they must do. Pond's Extract and Witch Hazel, another example of this kind—antikamnia—costs $1.00 per ounce, made up of acetenated 17 cents a pound, bicarbonate of soda, 3 cents a pound.

I hope something will be done to keep the bee-men from any of these refined ways of cheating, for if some one does not step in they will be selling some secret food preparation to promote long-tongued or long-lived honey-bees at fabulous prices, and give the novice sugar-water colored up.

I have looked at the unselfishness of your paper and admired it, as I do the same quality in all the big bee-men, and I am quite sure you made the statement from want of knowledge, and not as a paid advertisement. Truly yours, A. RICHTER.

In a nutshell, the situation is this: The American Bee Journal has been advising the use of a special preparation at a high price when something just as good can be had for less than half the money. The regret at having done this is only softened by the thought that it was done in good faith in the interests of bee-keepers, without any sort of pay, even by the use of space in the advertising columns.

Association Notes

AMENDMENTS TO THE NATIONAL CONSTITUTION.—The following are the amendments as presented to the Los Angeles convention by the Committee on Amendments, and which will be sent to the membership of the National Bee-Keepers' Association in December, for their approval or disapproval:

ARTICLE III.—MEMBERSHIP.

SEC. 1.—To be amended to read as follows:

SEC. 1.—Any person who is interested in bee-keeping, and in accord with the purpose and aim of this Association, may become a member by the payment of one dollar annually to the General Manager or Secretary; and said membership shall expire at the end of one year from the time of said payment, except as provided in Sec. 10 of Article V of this Constitution. Any person may become an Honorary Member by a two-thirds vote of all the members present at any annual meeting of this Association. No member who is in arrears for dues, as shown by the books of the General Manager, shall be eligible to any office in this Association; if such disqualification occur during the term of any officer, the office shall at once become vacant.

SEC. 2.—To be amended to read as follows:

SEC. 2.—Whenever a local bee-keepers' asseciation shall decide to unite with this Association as a body, it will be received upon payment by the local secretary of fifty cents per member per annum to the General Manager.

ARTICLE IV.—OFFICERS.

SEC. 1.—To be amended to read as follows:

SEC. 1.—The officers of this Association shall be a General Manager, a President, a Vice-President, and a Secretary, whose term of office shall be for one year; and a Board of twelve Directors, whose term of office shall be four years, or until their successors shall be elected.

SEC. 3.—To be amended to read as follows:

SEC. 3.—The President, Vice-President, Secretary, and General

Manager shall be elected by ballot during the month of November of each year, by a plurality vote of the members, and assume the duties of their respective offices on the first of January succeeding their election.

Sec. 4.—To be amended to read as follows:

Sec. 4.—The President, Vice-President, Secretary, and General Manager shall constitute the Executive Committee.

Sec. 5.—To be amended to read as follows:

Sec. 5.—The Directors to succeed the three whose term of office expire each year shall be elected by ballot during the month of November of each year, by a plurality vote of the members. The three candidates receiving the greatest number of votes shall be elected, and assume the duties of their office on the first of January succeeding their election. The Board of Directors shall prescribe how all votes of the members shall be taken, and said Board may also prescribe equitable rules and regulations governing nominations for the several offices.

ARTICLE V.—Duties of Secretary.

Sec. 3.—To be amended to read as follows:

Sec. 3.—It shall be the duty of the Secretary to keep a record of the proceedings of the annual meetings; to receive membership fees; give a receipt for the same, and turn all moneys received over to the Treasurer of the Association with names and post-office addresses of those who become members; to make an annual report of all moneys received and paid over by him, which report shall be published with the annual report of the General Manager; and to perform such other duties as may be required of him by the Association; and he shall receive such sums for his services as may be granted by the Board of Directors.

ARTICLE VII.—Vacancies.

Amended by adding the following clause to the end thereof:

Any resignation of a member of the Board of Directors shall be tendered to the Executive Committee. Any resignation of a member of the Executive Committee shall be tendered to the Board of Directors.

ARTICLE IX.—Amendments.

To be amended to read as follows:

This Constitution may be amended by a majority vote of all the members voting, providing such proposed amendments have been approved by a majority vote of the members present at the last annual meeting of the Association, and copies of the proposed amendment printed or written shall have been mailed to each member by the General Manager at least 45 days before the annual election.

James U. Harris,
Geo. W. Brodbeck,
C. P. Dadant,
W. F. Marks,
Udo Toepperwein,
Committee.

J. F. McIntyre Smiles—so says the Ventura (Calif.) Free Press in its issue of Aug. 14. Here is the paragraph:

> "A son and heir was born to the house of McIntyre, Thursday, and there is exceeding joy in the family. Five girls have come at previous times to bless the McIntyre home, and now as the sixth is a boy it is no wonder that Mr. McIntyre wears a beaming countenance."

Congratulations to that no longer boyless home.

Off for the Los Angeles Convention!—Getting ready to attend the National convention in Los Angeles began in this office quite a while before the starting time arrived.

After it was decided just where the meeting was to be held, some thought that it would be a great thing to get up a car-load of bee-keepers to meet in Chicago, and go the rest of the way together. The idea seemed to be a popular one. Soon applications began to come in for sleeping reservations in the tourist car that was to carry those who should finally be so fortunate as to be the favored party. They came from Michigan, Wisconsin, Ohio, and Illinois. Even a "youngster" down in Texas telegraphed us, desiring to know just when the bee-keepers' car would arrive at Albuquerque, New Mexico, as he desired to join the party there. (That telegram was delivered at our home after we had retired for the night. Until it was opened and read we wondered who had died, or what other terrible calamity had befallen some one. Then to see that it was just a Lone Star chap that was crazy to go to a bee-meeting—well, it was rather trying to a recent wanderer in dreamland.)

But, Wednesday evening, Aug. 12, finally came—the night we were to start on the long journey—nearly 2500 miles. It was arranged to spend the following Sunday at the Grand Canyon, in Arizona—65 miles north of Williams, on the Santa Fe railroad.

Our train left Chicago at 10:30—a little late in starting. All went to rest just as soon as the ebony porter could make up the berths.

Those who started out from Chicago were these:

Dr. C. C. Miller,
W. Z. Hutchinson,
Mrs. and George W. York,
Mrs. and H. D. Tallady,
A. F. Morley,
M. Best,
A. I. Root,
N. E. France,
H. H. Moe,
Chas. Schneider.
J. J. Shearer,
N. Brooks.

There were also two young men who we learned afterward were barbers. They were made good use of, as will be seen later on.

During the night there was an increase in the occupants of the car, for Messrs. E. D. Woods and D. J. Price, both of Illinois, got aboard the train. They were discovered the next morning, but no one tried to drive them out of the "hive." They were welcomed, and, like everybody else, helped to make the trip enjoyable all the way along.

The first morning found us in Kansas City, Mo., where Mr. and Mrs. Leo F. Hanegan, with Miss Baby Hanegan, of Wisconsin, joined us. Also Mr. and Mrs. E. C. Wheeler, G. H. Van Slyke, and W. M. Pierson, all of Iowa.

At La Junta, Colo., Mr. and Mrs. N. A. Kluck, of Illinois, joined the company. And at Trinidad, Colo., that telegraphic Texan—H. H. Hyde—got aboard. He was the last bee-keeper to come into the company, and he seemed glad enough to find himself among friends, even if all of them were entire strangers, excepting as he had read of some of them in the bee-papers.

Dr. Miller and A. I. Root were the "boys" of the crowd! And didn't they just enjoy that long ride together? It gave them such an unlimited amount of time to swap bee-stories and reminiscences of the days when they first met and became interested in bees, as well as in each other.

We were agreeably surprised at the appearance of things in Kansas, as seen from the car window. It was our first trip into that State. We were delighted. Everything looked prosperous. And, then, to know there was not a legalized body and soul destroyer—saloon—in all the State! That was enough to rejoice over, had there been nothing else. We felt like hurrahing for Kansas. It is a great State in so many ways.

At Hutchinson, Kan., there was some talk of leaving Pres. W. Z. Hutchinson, when he got off to get something to eat in "his own town." By the way, there was a little joke on "W. Z." at that place. He went into the dining-room with a number of other people, including a young lady from one of the other cars of the train. As they were all stepping up to the table, the young lady drew a chair back, intending to seat herself thereon. But imagine what her surprise must have been, when "W. Z." sat his long self down upon that chair as deliberately and contentedly as is his usual manner! He absent-mindedly thought she was simply a courteous waitress who was paid for doing just such little things among her other dining-room duties. He didn't realize what he had done until it was too late to offer an apology to the young lady. Let us hope they may both meet again same time in Hutchinson, Kan., and that "W. Z." can have the opportunity to do the same kindly, though unintentional, act for her.

That ride of a car-load of bee-keepers will live a long time in the memory of all who participated. What a splendid chance to visit! When one got tired talking with another, he could get up and walk to some other seat and tire out some one else. And so it went, day after day.

We will suppose now that it is Saturday, about 2 p.m., and we have all arrived at Williams, Ariz., and are ready to take the side-trip to the Grand Canyon to spend Sunday. Next week we will tell about it.

Honey as a Health-Food is the name of a 16-page leaflet (3½x6 inches) which is designed to help increase the demand and sale of honey. The first part is devoted to a consideration of "Honey as Food," written by Dr. C. C. Miller. The last part contains "Honey-Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by every one who has honey for sale. It is almost certain to make good customers for honey. We know, for we are using it ourselves.

Prices, prepaid—Sample copy free; 10 for 20 cts.; 25 for 40 cts.; 50 for 70 cts.; 100 for $1.25; 250 for $2.25; 500 for $4.00; 1000 for $7.50. Your business card printed free at the bottom of the front page, on all orders for 100 or more copies. Send all orders to the Bee Journal office.

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Why Not Help a Little—both your neighbor bee-keepers and the old American Bee Journal—by sending to us the names and addresses of such as you may know do not now get this journal? We will be glad to send them sample copies, so that they may become acquainted with the paper, and subscribe for it, thus putting themselves in the line of success with bees. Perhaps you can get them to subscribe, send in their dollars, and secure for your trouble some of the premiums we are constantly offering as rewards for such effort.

Convention Proceedings

The Los Angeles Convention.

Report of the Proceedings of the 34th Annual Meeting of the National Bee-Keepers' Association, Held at Los Angeles, Calif., Aug. 18, 19 and 20, 1903.

The 34th annual convention of the National Bee-Keepers' Association met in Blanchard's Music Hall, Los Angeles, Calif., Aug. 18, 19 and 20, 1903, according to previous arrangement and announcement of the Executive Committee.

The first session was held Tuesday evening, Aug. 18, and consisted of a royal welcome extended on the part of the California State Bee-Keepers' Association. Pres. T. O. Andrews presided, and an elaborate program had been prepared for the occasion. The music was furnished by the excellent orchestra of the First Methodist Sunday-school of Los Angeles, under the direction of Prof. Valentine.

In the absence of the city's mayor, Hon. M. P. Snyder, Prof. A. J. Cook, of Pomona College, was called on to deliver an address of welcome, which he did in his usual happy way. Dr. D. W. Edwards, of the city, also helped to extend greetings to the convention.

The responses were given by President Hutchinson, Secretary York, A. I. Root, Frank Benton, and others.

It was an auspicious opening to the sessions of the convention which were to follow.

WEDNESDAY MORNING, AUG. 19.

The first business session was called to order at 10 a.m., with Pres. Hutchinson in the chair.

Prayer was offered by Prof. Cook.

It was moved and carried that the following committees be appointed by the chairman later, to report during the meetings: On Amendments, Memorials, Publicity, Resolutions.

Pres. Hutchinson—I have no address, for there was such an urgent call to go out among the bees and get rid of foul brood over in Michigan that there was no time and no place to write an address. There is plenty of other work of more importance, and we may as well commence with business and let the president's address go. The first thing on the program is an address by Prof. A. J. Cook, who will now speak on

HONEY EXCHANGES AND CO-OPERATION AMONG BEE-KEEPERS.

You may know the old story of the lord and the Irishman coming down the street, passing by the penitentiary, when the lord said, "Pat, if everybody was in that penitentiary that ought to be, where would you be?"

"Walking alone, your honor," answered Pat.

I am walking too much alone in this matter of co-operation, and I tell you I believe heartily in it, and I wish this morning that I could so enthuse you that you would go home and stir up the people so that it would be felt from Maine to Texas, and from Colorado to Washington. It seems to me there is nothing more important than this matter of co-operation—working together. I believe in it so much that three of us at our place own a cow together—four of us, I should say. I didn't get it big enough. My three nearest neighbors and myself own a cow together. Is that union? Why, if that cow gets out there is no fault-finding in that neighborhood. And I tell you, it would be a good thing if you owned chickens all together—a blessed good thing.

Again, it costs $9.00 a year to take a daily paper. I could hardly afford that. If I were editor of a bee-journal I might, but, being a poor professor, my pocket-book is as flat as a cock-roach!

Now, three of us take a daily paper together, and we get along just as well. Don't you know it is a god thing—co-operation? We are working together. When I read my paper I know my neighbor has read the same thing. Perhaps when I meet him I will say to him, "What do you think of the news in that paper to-day?" And he will say, "Why, I just thought of you when I read that." And if there happens to be a lady living alongside of you, you see this might become very pleasant.

I don't stop there. I can not afford to take eight or ten magazines. My wife and daughter like to have them; I am too busy to read all of them. So twelve of us take the magazines together. My friends, that is practical co-operation, and it works well. I would like you to consider something of that kind. It pays. Co-operation is in the air, and we want a great deal more of it than we have. It is strange how slow we are in this matter. If I were not so big a fool myself I would say the whole community are fools. But it is strange that you people are not more wide-awake in this matter of co-operation—getting together.

I have a friend, an old student of mine that I think a great deal of, and I am going to introduce him to you here. He says it is impossible to get the people to co-operate fully on the Citrus Fruit Exchange. Although nearly all believe it has saved the fruit industry in this section, yet about 40 percent are all we can get into it—to the shame of our citrus fruit-growers be it said. It is strange that the people do not wake up to the importance of this great question. What is the great Standard Oil business? I tell you, they co-operate, and they get along, and that part of it is all right, and if they only got along by good and righteous methods, then we would all throw up our hats and say, "Go ahead!" And it is only because they are unrighteous in the way they do things that anybody complains.

Prof. A. J. Cook.

Even livery stables co-operate. I went down to San Diego the other day, and it was too far for my wheel, and the rail cars had gone. Of course, I had to go to a livery. Well, I went to a livery stable, and they wanted $6.00 to take me over. I said, "That is too much; and, besides, I am going for the State, and the State is poor, and of course I can't afford to pay that."

They said, "You have got to; you can not go with one horse, you have to have two horses, and that is what you will have to pay."

I said, "Is there another livery stable here?"

They said, "Oh, yes, there is one over there, and another one here, but it won't do any good—they will charge you just the same."

That is all right—they are all working together. Co-operation is in the air. I know the railroads are working together, and so do you. All these great business interests are working together, and we have got to work together. We want to go home and all begin to talk this.

Here in California we have this great Citrus Fruit Exchange, and it is a great success. There is no other co-operation of the kind which has ever had anything like the success of our Citrus Fruit Growers' Exchange. You have read what I have to say about that in the American Bee Journal. So I have asked Mr. Reed if he would not come in here and tell us about it. He is right in touch with this Citrus Fruit Exchange; he knows what it has done, what it has accomplished, and why it has failed to do what he and others have hoped for it to do. Because the methods that will be used there, will be the methods the honey-men will want to use, I want Mr. Reed to come up here and talk to us on this subject, and afterwards answer such questions as may be asked. And before Mr. Reed comes, I want to say something Mr. Reed would not say.

This is a tremendous undertaking, because in Southern California (and what I said last night was not for nothing), I may be mistaken, but I do believe from the bottom of my heart that there is not so intelligent a population in the rural districts in the world as we have here in Southern California. I believe it. I do not say that carelessly. I have traveled pretty largely in the northern part of our country, and in the south and east, and I have never seen the equal for intelligence of the farming classes to Southern California. We have a club at Claremont, and of that club eight are college graduates—two from Harvard, one from Yale, three Cornell, and so on. So we have men who have had their college training. We used to laugh at "book-farmers." We don't laugh at them any more. We see these book-farmers going to the top, and we go to them and ask questions. You think about it.

So I say, here in Southern California we have the cream of the country so far as culture is concerned in these pursuits. If that is the case, what would be true in this section would be more difficult in others. In California, work as hard as they may, they have only about 40 percent of the citrus fruit-growers in this organization. Yet I have not seen a man who did not say it was the salvation of the citrus fruit industry. Yet only about 40 percent of them joined. Haven't you got a load, then? Why, you have a backlog that your forefathers would hardly have carried, and you have got to carry it.

Sometimes I get like my friends Dr. Miller and Mr. Root—almost pessimistic. Sometimes I feel discouraged, and then see there was no need of discouragement. I am going to live a good many years yet, but I am a little afraid I won't live to see this general co-operation along all our industrial pursuits. I am afraid I won't live to see it, but we have got to have it. Why have we got to have it? We should not compete against each other. We should not compete. We should determine what is a reasonable profit, and then everybody should have it. That would never mean a good white sage extracted honey at 4 cents a pound. It would mean never less than 6 cents a pound. When we have this co-operation, when we get to that stage where we do not have this disastrous competition, we will get 6 cents for our honey.

We ought to be done with this matter of competition—this excessive competition which takes from us the profits—so that when the season is over our pocket-books look like cock-roaches.

Another thing that we find here very much to our detriment is the matter of railroad charges. You all know how exorbitant they are. It costs us $1.20 to send a box of fruit to Boston. That is a great deal too much. I have not a doubt but it is twice too much, and that is why they can water their stock over and over again. We would do the same thing if we got the matter in our own hands. Most of us would charge just what we could get, just as the railroads do. I don't know that Dr. Miller would, but most of us would. How are we going to prevent it? Take California, Do you know, we could afford out of what we lose in three years' time to build, own, and equip a railroad from here to Boston, and have it all ourselves? It is computed that what we lose above a reasonable profit would do that in three years' time. Now, if that is the case, would not co-operation be worth somehting? We could do that if we were working together. "Ever the right gives promise, and ever is justice done."

I am just as sure we will have this co-operation as that we will get up to-morrow morning. Whether we get it soon or late will depend upon the energy we put into it. Another thing, our legislation is not right. If we were all together, working together, we could get almost all we wanted in the way of legislation. We have a little touch of that here in Calfornia. We have 40 or 50 farmers' clubs. The people are really getting interested. It took a long time to wake them up. Mr. Hambaugh, here, could tell you a great many things about that. He went right after them "with blood in his eye," and did not recognize any such word as "fail." He said, "It is the right thing, and we will have it." And we all said, "Certainly, we will have it." And the first bill that got through the legislature was our foul brood law. We had these farmers' clubs, and they held a big meeting before the legislature met, and Mr. Hambaugh came down there, and he told us with reference to this foul brood law and inspectors (while he looked us right in the eye), "We want so and so"—and we all believed it. He said to these farmers' clubs, "Gentlemen, we want this; we need it, and we must have it." And they all said, "Amen," and they were all just Methodist enough to say right down inside, "Amen." And Mr. Hambaugh had the resolution passed, and we wanted that law, and that was the first law that was passed in the legislature without a single dissent. We didn't need any $300, because we had the farmers back of us.

We want the bee-keepers organized so that when they go to the legislature and say what they want they will get it. So we want this matter of co-operation in the way of legislation.

Let me tell you one thing more: For a year we had men like Mr. Hambaugh studying these things that we wanted here in California. We had tried for 12 or 15 years to get certain bills through, but we failed because the moneyed interests were against us. Was it not queer that these men said, "No, sir; you don't get that." I was too well brought up to doubt a man's motive, but I wondered a good deal when these men came in and battled so hard for what was just and right. We would not impugn their motives. We devoted a whole year to studying this matter with three of our strongest men at work. One was Frank L. Palmer—a great, big, noble man. They spent a year studying, and they corresponded with people East. West Virginia is way up to the top, and we profited by their experience.

When we got that bill just as we wanted it, we went before the legislature, and we said, "That is the law we want without any amendments," and we had a strong committee up there, and we didn't have to pay them anything; they wanted to go up there anyway, and they said: "My friends, you must not touch these bills; they are just what we want, and we know a big sight more about these things than you can possibly know, and don't you amend them." And there was not a single bit of amending done on these bills.

Now, we have a good Governor. He is a good man. I wish I could say that of all our previous governors, but we have not always had that kind. The Governor wrote to me and said in regard to that fertilzer law: "I wish you could see the pile of letters and telegrams I have in regard to that." If anybody would read that law, they would see there was nothing in it but honest, fair dealing. Now, here was co-operation. We were working together, and I tell you when I get to talking about these things that so nearly concern our vital interests, I wish I were eloquent, that I might make you feel that we must have co-operation—that we must work together for what is right.

Now, Mr. Reed is here, and, by the way, you are to have a good-looking man talk to you. I am free to say that, for he is one of our "old boys." He will talk to us about the Citrus Fruit Exchange, what it has done, what it ought to have done, and what he hopes it will do in the future.

(Continued next week.)

Proceedings of the Texas Bee-Keepers' Convention Held at the A. & M. College, at College Station, July 8 to 10, 1903.

BY LOUIS H. SCHOLL, SEC.

(Continued from page 581.)

BRUSHED SWARMS FOR SECTION-COMB HONEY.

It does not come within the scope of this paper to describe the many different plans and ways of making brushed or forced swarms, nor to trace out their origin, suffice it to say that my first knowledge of the method was derived from reading Mr. Stachelhausen's articles in Gleanings, some five years ago, though I had known, prior to that time, of its use in Germany. I will only try to explain in detail the two plans I most commonly use; nor do I always adhere rigidly to either of these plans in minor points, using altogether the shallow hive. Its ready adaptability to varied manipulations often tempt me to modify the process.

But I always try to keep in mind the three prime objects sought to be accomplished by brushing or shaking a colony of bees. Specifically stated they are, first, to secure a very powerful field-force just in the nick of time. Second, so to contract and specialize their work that practically all of the honey will be forced into the sections. Third, to prevent swarming surely and effectually during the honey-flow.

In my practice it is not profitable nor practical to try to run a whole apiary for comb honey, but rather to select those colonies that have reached a stage of development where danger of swarming might be apprehended, using the weaker colonies for extracted honey, and to care for the combs and remaining brood. After the second brushing or shaking, experience having taught me not to hold these hatching bees until the close of the flow, in order to unite them with the colony from which they came, but rather to utilize them as quickly as possible. But when it is desirable to strengthen the comb-honey colonies after the sections are taken off, I do so by drawing combs of brood from these same extracting colonies.

Spring finds my colonies all in two, three, and four story hives. But the weakest are furnished room as fast as it is needed. The first of May my honey-flow begins, and lasts 24 or 25 days. Hives, sections, and all are gotten ready. Half sheets of foundation are used, except in the two outside frames, which are drawn combs, and full sheets in the sections. When all is ready I move the hives a little to one side and back from the old stands, having first filled them with smoke, and loosely closed the entrance with grass. I then take the cover off, and knock the bees in front of the new hive, which an assistant has placed on the old stand, as I moved the old hive. I then take up the combs by pairs, and with a quick upward and sudden downward movement, dislodge most of the bees, and immediately replace the combs in exactly the same order as they were before the operation. Going through the several bodies as rapidly as possible, on an average it takes five minutes for the two-story hives; seven for the three story, and ten for the four-story ones. When all the frames are in order I close up the hive, contract the entrance, and go on to another which the assistant has smoked, moved, and fixed exactly as the first one was prepared. This gives the bees ample time to load up and get in that stupid semi-torpid condition so necessary to successful and easy handling. In seven or eight days afterward, shake as many bees as are needed to reinforce the swarm, and then tier them up on the weaker extracting hives spoken of at the beginning of this paper.

The other way of making brushed swarms that I mentioned was this: Put all the colonies in pairs, and if they are arranged some five or six feet between pairs, it will cause less confusion and mixing of bees while under the excitement consequent on the change and loss of the old home and brood. Ten days before the main honey-flow begins put a super of sections on the strongest one in each pair, and put two or three partly-filled sections in the center of the super. At the same time put a shallow body on the other colony by its side. This should contain full sheets of foundation, except the two center ones, which should be drawn combs. Now, when the honey-flow begins in earnest, fill the two old hives with smoke and set them back a little. Take the body containing the partly-drawn sheets of foundation from the hive it is on, and put it on the half-way ground where the old hives formerly were. Put the partly-drawn case of sections on this new hive, shake all the bees from the combs of the strongest of the two colonies, and put the combs of brood on top of the one not shaken. Turn the entrance in an opposite direction, and leave it where it is for eight days. On the eighth day, in the morning, move it away to a new stand. All of the bees that have ever flown will return to where it was, and finally go into the swarm hive, that being the nearest one to their own former location.

These hives containing such powerful swarms should be propped up at the corners, leaving entrance-room all around. Also another super of sections should be given at this time. Great care has to be taken, and judgment exercised, as to whether or not it is best to try to get the combs and sections built out before the main flow or not, on account of its difficult features. I would not recommend it to any but the most expert and painstaking, though I regard it as a good one, and results have justified me in that belief.

Last year was only an average year for honey, but I took 2500 pounds of section honey from 35 colonies treated after these plans, and the same colonies were built up and gave a further yield of 35 pounds of extracted honey in the fall, or a total yield of 3725 pounds, 70 pounds of which was section honey to the colony.

Now, as to whether or not it is best to use full sheets of foundation in the brood-chamber, my conclusions are, after numerous trials, that it is not best if the greatest amount of honey is the main desideratum; but if good combs are more or equally important, then it is perhaps best to use the full sheets, though I have known of flows where full sheets were of little value, for the bees simply would not waste the time necessary to draw them out, but merely added wax and built onto the foundation, not drawing it in the least. And if any man is so crazy as to think I don't know of what I am saying, I can show numbers of these combs yet.

Neither will full sheets secure all-worker combs with me, regardless as to who may say the contrary. In July last I prepared a number of colonies to brush as soon as the sumac flow started, which is usually about the 27th in this locality. From the best of these I secured 64 pounds in 14 days, and every one weighed an even pound, as they came off the hives. To those who have ever used the 4x5x1⅜ section comment is unnecessary.

Now, I think this about illustrates the possibilities of the brushed or "shook" swarm method with me, the only trouble that I have ever found with it being that I could not command the honey-flow. J. E. CHAMBERS.

THE TEXAS BEE-KEEPERS' ASSOCIATION.

Along in September, 1895, if I mistake not, the Central Texas Bee-Keepers' Association was organized, and held semi-annual meetings until the summer of 1898, when it was decided to hold annual meetings. The Association met at different places until the last meeting it held, which was at Hutto, Tex. At that meeting it was decided to accept the offer of the Texas Farmers' Congress, to meet in 1901 at College Station, Tex. Accordingly, in July, 1901, all three of the bee-associations of Texas met in connection with the Central Texas Association. Officers elected were, J. B. Salyer, president; H. H. Hyde, vice-president; Louis H. Scholl, secretary.

Before the program was taken up I, myself, made known to the members a plan of organization which was adopted, and a committee on program appointed, of which I was a member. The committee reported that we disband the Central Texas Association and call ourselves the Texas Bee-Keepers' Association; and that we affiliate, as far as possible, with the Farmers' Congress of Texas. The Association was organized with the officers as previously elected. A resolution was offered and adopted, asking the State of Texas for an appropriation for an experimental apiary, and a legislative committee was appointed.

The special session of the Legislature made an appropriation for the establishment of an apiary, through the influence of the Association and Prof. Mally, of the A. & M. College.

At the meeting of the Association in July, 1902, a legislative committee was again, fortunately, appointed. During the summer several cases of foul brood developed in the State, thus making it necessary that we have a foul brood law. Accordingly, the Association and the A. & M. College went to work and secured a foul brood law for Texas. This law is now in force, but practically inoperative, from the fact that from some oversight no appropriation was made to get the law started. However, where the bee-men will get together and agree to foot the expense, their own and any other apiaries may be inspected and treated by the State entomologist or his assistants.

By an arrangement with the publishers, the members of the Texas Bee-Keepers' Association get reduced rates on all journals, and by paying one dollar they are members of both the Texas and the National Associations.

Such, in brief, is the record of the Texas Bee-Keepers' Association, and, in my opinion, it is a very worthy one, and one to be proud of. Every bee-keeper in Texas ought to be a member of the Association, and help fight the battles that it is fighting for the bee-keepers. One and all must admit that it has done a great work, and any bee-keeper ought to feel ashamed of himself to stay out, in view of the battles that have been fought and won with so few members.

I think the future is bright for the Association, and we have only to press on in the future as we have in the past, victoriously attacking any new problem that presents itself. We have an Association that we may well be proud of, and one that is doing a great work. Let us, one and all, rally around it.

I shall not attempt to forecast the future of the Association, as that would be impossible; however, I am sure it will be a bright future. HOMER H. HYDE.

(To be continued.)

Contributed Articles

Carbolic Acid for Getting Swarms Down from Trees.

BY A. C. F. BARTZ.

THE instructions given in the item on page 510, are very good, as far as they go, but after having read the whole it makes me feel kind of sorry for those people who are too old to climb, and especially the bee-keeping sisters, for it is out of the question for a lady to strap on a pair of climbers, pruning shears, bucksaw, claw-hammer, or perhaps a whole carpenter shop, climb up a tree and saw off a limb, tie it to a rope, get tangled up in the rope herself, slip, and probably be fastened to the tree, and may be make it necessary for some one else to take down bee-keeper, swarm, and cabinet shop. And for these reasons I gave my experience of recent date to the bee-keeping world, and I am sure many of the readers, after trying it, will be satisfied, and never make an attempt to get a swarm out of a tree too tall to be conveniently reached from the ground by climbing it.

Then, too, how many swarms do not alight on a limb that can be cut off and carried down, but will string out on the trunk of a tree five or six feet or more? And it was one of those troublesome, hard-to-hive ones which caused my noddle to get down to hard thinking.

It was a tremendously large swarm which plastered itself to a tall tree, about 20 feet above ground, and, I tell you, I dreaded to climb the tree, and even if I did I did not know how to get the swarm off unless I took the smoker and smoked them off, as I have done many times. But, then, I would have to climb the tree. When all at once the thought struck me, "Bees are afraid of carbolic acid." No sooner had I thought of it when I sent my ten-year-old boy to get a 2-ounce bottle of carbolic acid, while I got two poles, one 10 feet and the other 16 feet long, and nailed the two together, which made a pole about 24 feet long; but a fish-pole, or any other light pole, will do better.

I took a piece of cloth about 4 feet square, folded it up 4 times, so that it made a piece of cloth folded about a foot square. I tacked it on the pole in two places, top and bottom, as it might be in the center of the cloth, thus leaving the two sides of the cloth hanging loose, something like a stiff cloth hanging over a pole.

Then I poured the two ounces of carbolic acid on the cloth, raised the pole up and brought the now carbolized cloth over the swarm on the tree at its highest point, and gently passed it down the tree as the bees fled from the cloth, when, in less than 5 minutes, I had the swarm almost in a solid bunch.

But I was not satisfied. I proceeded to follow them up with the cloth, being careful not to kill any. But, my! how they got out of that tree. It made me laugh when they came down and lit on another tree, so I could easily hive them standing on the ground.

Now, some one might object to this procedure for fear of losing the swarm by its going to the woods. But judging from the many swarms I have smoked out of trees, and never having lost one in this way, I feel safe to say that a swarm does not leave if disturbed shortly after alighting, but sticks to the first place it first settled on, or very near to it. And, furthermore, I do not handle swarms of this kind very gently, that is, swarms coming out of the regular order of management with virgin queens, which I should think would have a tendency to make them leave if that was their nature, on being driven off from the first place they settled on.

The next time I try the acid I shall use a large sponge instead of the cloth, but shall never climb another tree to take a swarm down.

I made another experiment with the acid on a swarm, out from which I wanted to take the virgin queens. I put the swarm into an empty hive with a queen-excluder above and below, and tried to smoke the bees out of the hive in order to find the queen; but the bees refused to leave the hive on being smoked, but would, if smoked from the top, go down to the bottom, and if smoked from the botton would go to the top. Some of them of course flew, but enough of them of course stuck to the hive to make the procedure a long, tiresome job, if not a total failure. Then I thought I would play a little trick on them, and took the acid cloth from the pole above mentioned, raised up the hive, zinc and all, and pushed the cloth spread out under the hive and let it down on it, when at once the bees started to the top away from the acid. But there I was with the smoker, and gave them no chance to cluster, but they left the hive as though a panic struck them, excepting the drones and queens, which could not escape.

The bees went to the hive from which they swarmed—just what I wanted—as I did not see them issue, and I intended to put them back again; and anyway it will be seen in this last procedure I "killed two birds with one stone"—I got the bees back to their home, and I had the queens and all the drones in the swarm also caged.

I now covered up the hive with the drones and queens in it, thinking that I would dispose of then at dusk, but had forgotten about it, and in the morning, when I found the hive still covered up in the yard, I opened it at once, and found everything dead in it. This, of course, was more than I expected or intended to do. I think that the fumes of the acid killed them very slowly, although it frightens them terribly. I would not advise the use of the drug for the purpose of killing drones, unless we learn from some of our professors that that drug makes short work of destroying bee-life. Chippewa Co., Wis., Aug. 11.

Getting Both Increase and Honey—Other Matters.

BY J. E. JOHNSON.

WHITE clover bloom was fine, and yielded well. Basswood was a failure, but we did not need it. There is a little white clover yet. Simpson honey-plant grows wild here, but it is not very valuable; also motherwort, but it does not attract bees as does catnip. My bees are still storing honey in shallow extracting-combs, but are not doing much in supers where they have to build comb; this is mostly from catnip and sweet clover, and smartweed just beginning to bloom.

Now, I see that the question is often asked of Dr. Miller. How can I increase my bees rapidly and still get lots of honey? As I started last spring with 12 colonies, and wanted both honey and increase, I formed a plan how to get both, which worked well. This is how I did it:

I found in early spring that my bees were nearly starving. I then fed them with candy, as per Abbott's plan, until it was warm enough to feed syrup. The most of the colonies were weak in bees, with little or no honey. I fed them every evening only about a half pint of syrup, some less than that. White clover promised to be abundant. By the time fruit-blossoms came out I had nearly all colonies ready for supers. I then put on one super with shallow extracting-frames containing for starters two-inch strips of foundation with quilt above to keep warm. During a cold spell in fruit-bloom I fed again every evening for nearly a week, increasing the feed as the bees became stronger, always above the brood-nest, and always just at dusk of evening. I also kept entrances contracted during cool weather. White clover and raspberry came in bloom about the same time, white clover being two weeks earlier than usual, and May 15 found me with a good honey-flow on, from both white clover and raspberry, and bees enough to fill two supers in nearly all 12 colonies.

I then soon began to slip an empty super under the top one. By June 1, the brood-chamber of the 8-frame Langstroth dovetailed hive was nearly filled with brood, and from one-half to three-fourths of the super of shallow frames. I then gave some another super next to the shallow frames. Everything worked well until a rainy spell struck us, and for eight days we had three or four warm showers every day; as usual, under such circumstances, the swarming-fever struck the bees. They would work for dear life between showers, and swarm.

By this time most of the colonies filled three or four supers with bees, and were capping the first supers. I then put another empty super on top, to give room, but the swarming still continued—nearly all swarmed three times, and I just let them swarm, but put back all fourth swarms. When two swarms would come out at once I would cover one hive up tight with a blanket, and, as Dr. Gandy says, they would immediately quit coming out, and would not then swarm until afternoon or the next day. These first swarms were hived on starters in brood-frames, and a super containing sections, and they filled it chock-full of bees. In two or three days I would slip another super under the top one, which would prevent pollen in sections; this I did until they all had three or four supers.

Now, as the old colonies had so much brood hatching, the second swarms were large enough to work in two supers, and to the third swarms I would give the extracting or shallow-frame super. This, of course, left the old colony pretty weak, but as we had a good honey-flow on, several of these supers were capped, which I took off and put on the market at 15 cents for a 3⅝x5x1½ section, which sold as fast as I could get it to the home market. It was nice and white, and no other honey on the market. I ornamented every section with my business card, by stamping with rubber stamp.

Then I took some unfinished supers off the old colonies and placed on new swarms to finish until I had only one super left on an old colony. This contracted their room, and when the young queen began laying she found lots of empty cells in the brood-chamber and bees enough to rear brood, but not to gather any surplus; but they have now built up so as to be able to fill two supers of bees and are storing surplus again, and are ready for the smartweed flow.

Several of the first swarms swarmed the second time. I put back these second swarms, but they would not stay back, so I hived them in shallow extracting supers, and set them on the parent hive the next day after taking away the queen. In some of them I could not find the queen, but they settled their own disputes and quit swarming. I also made a few nuclei in the spring, which have built up.

I reared my own queens from a colony of long-tongued bees. That colony did not swarm, as I used so much of her comb-brood, and I believe I have taken off 90 sections of comb honey, and they are working slowly in 90 more sections, and will soon have them completed. Some of the first swarms have nearly finished 150 sections, and are working in four supers now. These shallow frames were moved up away from the queen, and as brood hatched out they were soon filled, extracted, and placed on the hives again.

So far this season I have taken off 1400 pounds of honey, all comb but about 200 pounds. I am taking off about three supers a day, using bee-escapes. I have about 1000 pounds ready, or nearly ready, to take off, and 50 colonies strong enough to fill from two to four supers with bees for the smartweed flow, which is just coming in.

Now, this plan would not work in some seasons, but this is a good year. I could have had much more increase, but I wanted honey also. Smartweed promises a fair crop. All queens seem to be prolific in a good season.

I have had a hard time to get hives and supplies, but I ordered an extra large supply early, so I managed to get along. I want to say right here that a certain bee-supply dealer beats the world to get a move on him, and can fill orders quick when he has the supplies; but when everybody wants a whole lot of all kinds of supplies, right away, quick, and he happens to be just out of almost everything, then we are liable to think him a slow poke. Let me give a little advice: Get your supplies early; then if you have to send after a lot of supplies right in the busy rush, and don't get them right away, nor hear from the supply-dealer, and you get plum stuck, write the supply-dealer a real sassy letter, just give him fits, call him lazy, slow poke, and call him everything you can think of, only don't swear. Write about 24 pages; spend a good half day at it, even if you are busy; ask him if he got your order; tell him he is a thief and a rascal, and is probably off on a drunk, and not attending to his business. When you have it finished, read it over carefully, and if you see where you can make it a little stronger, add at least 10 more pages; then, when it is ready to mail, go out and chop for your wife an armful of wood, make a good fire in the kitchen stove, and then open the lid and quietly drop the letter in the fire, and you will feel lots better. And so will the supply-dealer.

When your neighbors come three or four times a day to get you to go home with them and bring an empty hive with you, and climb up to a tree top and get a swarm of bees that came there, and then hive them and give them supers with foundation, and show him what a queen looks like, and explain all about bee-keeping in general, then promise to help him cut all the bee-trees he can find this fall, and bring empty hives and transfer them for him, and lend him your smoker and bee-veil, and three or four bee-books, and its—"I'll hand you the money some time for the hives." Just say first, last, and at all time, that you are sorry, but you just can't leave your own business, and can't help him at all right now; and that you have not even time to talk to him. Then hand him a copy of the American Bee Journal and a catalog of supplies, and bid him good-by—and it is "Come over when I am not so busy."

This has been a good honey season, and the bee-keeper that attended to his own bees all right will have lots of honey. But hundreds of bee-keepers that neglected their bees will not have any more honey than usual. I asked one bee-keeper how his bees were doing. "Oh, just fair," he said, "some have swarmed five or six times. I could not get hives, so they were put in boxes, some in barrels, and some were left." In fact, he got tired of hunting up boxes, and just let them go.

I asked him how much honey he had taken off, and he said, "Just a little bit; the old hives are full, I guess, or they would not have swarmed. They have had the supers on the upper story two or three years, so I guess they are full; they are so blamed cross I hate to do anything with them; I guess I will wait until cold weather. They tell me you are a good hand with bees. I wish you would take it off. I bet it is full of nice honey. I pried up the lid, but they got so cross I had to run, and did not get the lid down tight, and now they are so cross I don't dare go near them; and the bees are all over the hive. They say bees don't sting some people, but they just pop it to me."

I said I had all I could do with my own bees, and got all the stings I cared about at home.

My honey is selling for 15 cents per Ideal section, which is about 17 cents per pound. I get 12½ per section, the dealer 2½ cents. I advertise in different ways, and sell at home and near-by towns. People are better able to buy honey now than they were several years ago, and this locality, at least, will consume more than usual. Other eatables are high; butter is from 15 to 20 cents per pound to the consumer, and honey should not be less, nor will mine be. Honey is not a perishable article to be dumped on the market right away, and if honey is sold cheap it is the bee-keeper's own fault. We do not often get a good crop; let us not be foolish and sell it for a trifle.

Later I will give you my plan of selling honey.

Knox Co., Ill., Aug. 8.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Dividing Just Before Swarming.

Can I transfer a colony just before swarming, and let part of the bees rear the queen and brood and make another colony out of the bees in the old hive? MISSISSIPPI.

ANSWER.—Yes; put the largest part of the brood and bees on a new stand. Better not leave more than one frame of brood with the queen, and perhaps it may be well to take that away after a day or two.

◆

Removing Pollen from Combs—Shaking for Foul Brood—Rearing Queens in the Fall.

1. Will the bees remove pollen from the center combs in the brood-chamber so the queen can have a compact circle to lay in, the combs being filled by queenless bees, caused by the queen being lost in mating? The pollen is fresh, and the cells about half full.

2. Is one shake or two shakes right to cure foul brood? Mr. McEvoy says two, and Messrs. Root, Davenport, and others say one. When doctors disagree, what is a beginner to do?

3. Would a super that had been over a foul-broody colony be safe to use after being in an oven about an hour, the temperature about the same as that for baking bread, or a little below?

4. Can good queens be reared at this time of year, while the bees are still gathering considerable honey, by simply removing queens from reasonably strong colonies?

5. Would 20 drops of carbolic acid in ½ pint of water

disinfect hands and tools after handling a foul-broody colony? IOWA.

ANSWERS.—1. Yes, give them time enough and you will find the pollen all out of the middle of the brood-nest.

2. The decision of the question hinges upon the point as to whether the diseased honey will all be used up in the four days in comb-building. Mr. McEvoy thinks some of it will still be left, stored in the newly-built cells; the others think it will all be used up, making a second shaking unnecessary. I am not authority enough to decide.

3. Yes, and even without the baking it would be safe, for it is now generally agreed that the hive of a foul-broody colony does not need disinfecting, and the super would be as safe as the hive, if not safer.

4. Yes, "if considerable honey" means a flow sufficient to keep the bees busy, and at least a little on the gain. You can help matters by feeding. But it's wise to make your plans for another year so as to be all through with queen-rearing earlier in the season.

5. I don't know. Some one please tell us the right proportion.

Uniting Colonies in the Fall.

I am a beginner and have 6 colonies of bees, spring count. I have increased to 9 this summer, two of which are quite weak and small, and I wish to unite them. Do you think it a good plan to smoke the strongest colony and put the weakest colony on top of the other, and drive them down with smoke, and after they are down, smoke them slightly more, and then cover them up? or is there a better plan? WASHINGTON.

ANSWER.—I think it would be better not to drive them down, but to leave them to themselves for a few days, setting the one hive quietly over the other at a time when bees are not flying—preferably on a cool day—then after the bees have got acquainted put the best combs of each into the one hive. It might be a little better, when the one hive is put over the other, to put paper between the two, leaving a hole in the paper large enough for one bee to pass through.

Swarm Hanging on Tree Several Days.

If I am correct, a swarm in Wisconsin hangs on a limb over night in some cases, but never more than one or two nights. We recently had a swarm at one of our out-yards hang from Sunday until Friday morning, when they were hived and seemed perfectly contented. The weather was fair all this time. Is this an unusual occurrence, and can you account for it? WISCONSIN.

ANSWER.—It is unusual for a swarm to hang over night, still more unusual for it to remain two nights, and extremely unusual for it to remain five nights, as in your case. I don't know what should make the difference; possibly the rain or something else prevented their breaking cluster at first, and they began building comb and were reconciled to stay. Very likely if you had not hived them they would have hung there permanently.

Hiving Swarms on the Old Stand.

On page 371, beginners are advised to hive new swarms on the old stand (to prevent second swarms), and a week later take away the old colony to a new stand. I tried this and it worked fine the first time. But the second time I tried it there was a second swarm came out of the old colony in four days. Will you kindly tell me what was the cause of this?

Would there be any harm in moving the old colony in less than a week to its new location? MASSACHUSETTS.

ANSWER.—As a rule, the prime swarm issues when the first queen-cell is sealed, and a second swarm issues shortly after the first virgin emerges, making the second swarm about eight days after the first. It may happen that on account of bad weather, or something else, the issuing of the first swarm is delayed, in which case there will not be as much as eight days between the two swarms—in your case it was four—in which case the wait of a week is of course too long. In that particular case it would have been all right to move the old hive in three days; but such cases are not frequent enough to make it advisable to move the hive in so short a time. In ordinary cases the depletion would not be sufficient to discourage the bees always from swarming; for you will understand that the colony will be gaining strength rapidly every day from the hatching brood. Moving the hive earlier than a week might prevent swarming, but it would not be so sure.

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, Ohio.

RUBBING THE PLACE STUNG.

The good maxim, "Do not rub the place where a sting is received," hardly applies to old chaps well inured to stings. Sometimes when I fear that a sting is going to give trouble, I purposely rub the place violently and at once. The idea is to dilute and spread the poison before trouble gets begun. The plan works well with me. Page 478.

AFRAID OF MOTH-BALLS.

Bees are insects as well as moths; and I fear that any moth-ball strong enough to stand off the one would bring more or less injury to the other. Page 483.

INTRODUCING LAME QUEENS.

In introducing a queen not able to walk, there is another danger in addition to danger of hostility from the bees. She tumbles, or gets tumbled to the bottom, to chill and starve and be neglected there, or possibly to get more tumbles out onto the ground. Page 483.

THE "DOINGS" (?) OF THE NATIONAL.

A column entitled, "What the National is Doing," Mr. Herman F. Moore wants. Some pre-requirements. National must be doing something, and some one qualified must write it. We hardly need a column of well-looking nothings which busy readers would skip at sight as they skip most of the columns and pages of the 16-page daily. Page 486.

UNAPPRECIATED GENEROSITY.

Dr. Peiro, I feel somewhat as I suppose a good mother must feel when she finds her children have been misbehaving themselves toward respectable passers-by. Fifty of our children received valuable time free, and cuttings presumably valuable, and not one heeded the request to write results! I don't blame you, Doctor! Still, it would please me *best* if you would rub the sore feelings into feeling better, run and play at something else for awhile—and then turn up again on the same subject. You're not alone. "Seven thousand in Israel do good for the sake of doing good, and get similar reward." It's only in the sweet "Thy Kingdom come" that the animal's, "Get all the good grabs you can and render nothing in return," will be found entirely absent.

Still, contra considerations are possible. Possibly a good many failed to make their cuttings grow, and didn't want to ride a free horse to death by asking for anything further. And I imagine that Uncle Sam is the leading villain in the case. He long has paid the bill for his politicians to shove free garden seeds under everybody's nose—request to write results printed on. Treating you as they treat Uncle Sam may be a little unpleasant, but is not doing you any dishonor. Page 492.

REARING COMMERCIAL QUEENS.

George B. Whitcomb seems to have an idea that commercial queens are often deteriorated by being reared from No. 2 eggs. Has this idea reasonableness enough to call for a discussion, and for experiments later on, perhaps? Some mother-queen alleged to lay, or at least to be capable of laying, No. 1 eggs and No. 2 eggs. When in full tide of laying she finds that she has a whole empty comb ahead of her she gets a hustle on, and lets the eggs fly before they have had quite time to become No. 1. Feeble plants raised from half-grown seeds, feeble queens from such scant-timed eggs. This is surely one of the "important if true" matters. The opposite of this makes toward accounting for the excellence of natural swarm queens. Queen seldom laying in natural cups except when crowded for room, and when the eggs have the last possible item of development. But how about the choice queen kept in the nucleus on purpose to keep her from shortening her life by profuse laying? If things in the nucleus are all right, and the breeder is so run as to lay only 200 eggs a day (instead of the 2000 she might otherwise lay), will there be any No. 2 eggs? From one point of view all the 200 should be at the best possible quality. From another point of view not so—whole machinery running too slow for best results. Too few workers engaged in giving her the wherewith, and those few too languid about it. Egg No. 1,500 at the close of a day when she would gladly have laid 2,000 is apparently the child of a stress and superabundance which cannot exist in the other case. Whole thing does not amount to a hill of beans, perhaps—and then, again, perhaps it does.

Hard to get the long Alley strips if one must not let a breeding queen have any large room ahead.

While we're at it I'll go somewhat further and say that I have suspected that *influences*—needed influences of development coming from the living bees—go right through the sealing of cells, and are needed by sealed cells, and missed when absent, and also missed when partially absent by the colony's being too weak. This is altogether beyond and apart from the danger of chilling. Where shall we get to, then? To the point where we must have a full, rousing colony all the time, and the queen-rearing nucleus abolished. Page 475.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

An Older Sister—Bee Hat and Gloves.

I'm one of "Our Bee-Keeping Sisters," for I've been handling bees for 33 years without a break. I'm in my 72d year, and I've taken care of my apiary almost alone this season, as my husband is an invalid.

My apiary has been growing smaller for about 13 years—no great losses, but gradually; the increase not being equal to winter loss.

The seasons have been poor, but the colonies have been well cared for. If I'm to blame it is because I neglected to introduce young queens, and there was so little swarming.

Last season was the first entire failure we ever experienced; the bees stored a winter supply, but no surplus. During fruit-bloom the bees built comb under the devices and then starved, as I found to my sorrow when I returned from Florida, May 2. I gave them syrup until they neglected the feeders. Honey came with a flood, and as soon as a bee left a cell it was filled with nectar, and the queens had no chance to lay. There has been very little swarming in our apiary. I would have preferred more.

A BEE-HAT OR MASK.

When I first began bee-keeping I purchased "Langstroth on the Hive and Honey-Bee," and I followed his directions in making a protector for my head, and I've never regretted it. I've tried veils galore, but they would catch on limbs of trees, and tear, or, while working, get close to my face or head, or where it was fastened about my neck, and I would be stung.

THE HAT AS I MAKE IT.

I measure from the top of the head to my shoulders, and cut this length from a web of fine wire-gauze, painted green, allowing a liberal amount for hems, bottom and top. I roll the hems, working all loose wire in, and bind with cloth; this is to prevent the ends of the wire from scratching when set over the head. Then roll it into a cylinder large enough to go over the head; roomy, but not too large. Sew a top to this cut from pasteboard, not round, but oblong. To the bottom a cape with an armhole on the right, and open on the left.

The front should be shorter than the back, and rounded out at the top. There should be a short piece over each shoulder, with a draw-string at the bottom.

I put the hat on, with my right arm through the hole, and tie at the left, and put on a linen vest, and button it up, and no bee can get at my head.

Bees do not sting through starched linen, and sometimes I wear a linen coat, as it has sleeves, and an apron tied around, so that no bees can creep under it.

BEE-GLOVES.

I prefer a small buckskin glove with a gauntlet of ticking or heavy drilling reaching to the elbow. I don't button the glove, but sew up the opening, having it loose so it can be drawn on easily. I've tried rubber gloves, but they are a delusion and a snare.

Clad in this armor I can work with confidence, knowing that no bee can possibly sting me.

Peoria Co., Ill., Aug. 10. Mrs. L. Harrison.

A Nevada Sister's Report.

Our bees have done well. I had 45 colonies in the spring, and increased to 74, but did not receive any honey to speak of from the increase, but they are all filled up ready for the second crop of clover. From the old colonies I obtained 29 cases of comb honey, and 70 gallons of extracted—beautiful alfalfa honey. I have sold 60 gallons of extracted at 80 cents a gallon. We expect 11 cents a pound for our comb honey. The second crop of clover is beginning to bloom. I do all the work with the bees.

Washoe Co., Nev., Aug. 14. Mrs. B. A. Cooper.

Swarming—Rearing Queens—Using the Bee-Escape.

I am a reader of the American Bee Journal, and enjoy it beyond expression. Although my apiary is small I take pleasure in working in it. The season is fair; I will get three supers of comb honey to the hive. Some of this will be on exhibit at the Clark County Fair.

As I am a novice in bee-keeping I wish to ask a few questions:

1. Is natural swarming a hindrance to success?
2. Can as good or better queens be reared by artificial ways as by natural?
3. If the queen-cells are cut out of the parent hive eight days after the prime swarm issued, why do you prefer to put the prime swarm on the old stand? I like to give both swarms the same chance.
4. Will a bee-escape work under a super or hive having brood in them? Mrs. Della E. Stone.

Clark Co., Wis., Aug. 6.

1. That depends. If you want increase it is all right to let the colonies swarm. But if it is honey you want, then I would try to have as little swarming as possible. It is not an easy thing to prevent all swarming, but all but prime swarms can be prevented without much trouble.

2. If you have only one colony you will get just as good queens from it by natural swarming as by any artificial process. But if you have a number of colonies it is not wise to trust entirely to natural swarming. Find out which is your best colony, and secure queens from that stock.

3. I don't cut out the cells when I make the change. I let the bees do that part of it. I believe you will get better results by throwing the flying force into the prime swarm, as that will give you one strong colony, and it is the strong colonies that give us the honey. If, however, you want to give each colony equal chance, hive the swarm on a new stand.

4. Not very satisfactorily. The bees are loth to leave the brood.

"The Hum of the Bees in the Apple-Tree Bloom" is the name of the finest bee-keeper's song—words by Hon Eugene Secor and music by Dr. C. C. Miller. This is thought by some to be the best bee-song yet written by Mr. Secor and Dr. Miller. It is, indeed, a "hummer." We can furnish a single copy of it postpaid, for 10 cents, or 3 copies for 25 cents. Or, we will mail a half-dozen copies of it for sending us *one new* yearly subscription to the American Bee Journal at $1.00.

The Premiums offered this week are well worth working for. Look at them.

FROM MANY FIELDS

A Good Beginner's Report.

I have had a good year, and the honey is still coming in. The weather is not the best just now. Turns cold so easily. But when they get a chance, the bees are working well. I started in March with two colonies, and increased to eight. My strongest colony has given me 300 pounds of honey. I drew on it for increase also, but used the other with which I started in the spring for increase. I sum it all up thus: 400 percent increase in colonies; 50 percent income on investment, plus all that a family of five can eat and what I have given away. And these last two items are of considerable importance. If I can do as well every year I think I would like to keep bees all the time.

But something tells me that it would be the part of wisdom to buy a barrel of sugar for next year with part of the proceeds of this.

R. B. McCain.

Grundy Co., Ill., Sept. 8.

Nevada Bee-Notes.

The past season has not been up to the average. The first crop from alfalfa was more than an average gathering, but the second bloom was light and we secured but little. Our crop will be about 150 pounds per colony, spring count.

This locality—the Big Meadow plain—will produce this season about ten or twelve carloads. The honey is water-white.

Foul brood is everywhere around the Big Meadow country, and we are now preparing to fight it.

Nevada has a good foul brood law, copied after the McEvoy plan, but as yet we have no inspectors appointed. Nevada Apiarist.

Humboldt Co., Nevada, Sept. 2.

Season's Report—"Shook" Swarms.

The season being nearly closed I will report the results. I have 175 colonies, spring count, 2000 pounds of No. 1 comb honey, 300 pounds of No. 2, and 3800 pounds of extracted No. 1, all gathered after July 15 from blue thistle. It all came up and blossomed after the rains which followed our terrible drouth. Increase, none. Swarms cast, 10; 3 hived themselves in hives of combs stacked up beside the honey-house; seven hived on three frames and dummies, and the three frames given to other colonies last week. I did not divide any this season, as there was not over a quart of bees in the best colonies June 1.

I notice a great deal about "shook" swarms. That has been my practice ever since I commenced using frames, about 25 years ago. I mark all my hives, just what they produce; the next spring I take brood from those that did not do well, and build up those that were the best, unless they are very strong. When I see any inclination to swarm I get an empty hive and put it in place of the old one, find the frames with the queen, go to a colony that did not do well the previous year, draw out about four frames and put them in with the one frame and queen, and fill up the hive with frames of comb of the

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ALL IN 60-POUND TIN CANS.

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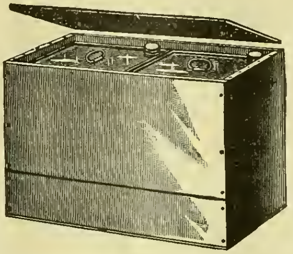

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This is the well-known light-colored honey gathered from the rich, nectar-laden basswood blossoms. It has a stronger flavor than Alfalfa, and is preferred by those who like a distinct flavor in their honey.

Write for Quantity Prices by Freight, if Interested.
A sample of either, by mail, 10 cents, to pay for package and postage.

Order the Above Honey and then Sell It.

We would suggest that those bee-keepers who did not produce enough honey for their home demand this year, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere.

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I was showing my father yesterday how my bees, which I bought from you, were out working everything in my apiary. Send me 4 Buckeye Red Clover and 2 Muth Strain Golden Italians. I will order more after next extracting. THOS. H. KINCADE.

Buckeye Strain Red Clover Queens. They roll in honey, while the ordinary starve.
Muth Strain Golden Italians—None Superior. .·. Carniolans—None Better.

Untested, 75c each; 6 for	$ 4.00	Tested, $1.50 each; 6 for	$ 7.25
Select Untested, $1.00 each; 6 for	5.00	Select Tested, $2.50 each; 6 for	12.00

Best money can buy, $3.50 each.

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The Fred W. Muth Co.,
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colony I draw from. I leave about three frames, and put on super; the rest of the hive filled with dummies. I intend to have a decrease instead of increase every fall, and buy enough in the spring and transfer them.

I used to buy a good many queens, but I found I had to get rid of about seven out of ten, as they were no good except to look at. One lot of queens I got, the drones all had red eyes; the bees would not gather honey enough to winter them. One other lot would swarm all the time, and not one drop would they have to winter on; they all died before time to put them in the cellar. The best lot I ever got came from Massachusetts, every one was leather-colored and good honey-gatherers, and I have bred from them for three years.

Two years ago I sent for a red clover queen; she came, and looked like a "dandy." I reared two queens from her, and have kept the three colonies two seasons, and not one section of honey have I got; No. 1 or No. 2 would have just a little chunk, about $\frac{1}{8}$ of a pound, and as black as New Orleans molasses.

I have tried the "shook" plan on them, only 1 did not use an extra hive. I suppose if we had more red clover instead of alsike they would have been a real nice thing to have. C. M. LINCOLN.

Bennington Co., Vt., Aug. 31.

Bees Doing Pretty Well.

Bees are doing pretty well here this season on cotton. This is about the only plant we get any surplus from in this locality. We usually have plenty of horsemint, but we rarely get any surplus from it. and do not depend upon it as we do the cotton.

A few of the people here keep bees, but most of them have them in box-hives.

F. R. KNAUTH.

Williamson Co., Texas, Aug. 29.

Dr. Gallup's Bees Good Ones.

On page 344, Mr. H. Alley says he had never heard any one else say that Dr. Gallup's queens were wonderful except Dr. Gallup. I am the owner of the last bees that Dr. Gallup reared—22 colonies. They did not need any doubling up to get honey. It is true that 3 colonies did not do well, and it was all they could do to take care of one super, but the other 19 colonies handled two supers all right, and the 22 colonies gave an average, per colony, of $23\frac{1}{2}$ pounds over the balance of my apiary of 138 colonies. These 138 colonies were doubled back to that number at the beginning of the main honey-flow from 172 colonies. About one-third of the 172 colonies were bought from Tom, Dick, and Harry. The balance were my own rearing; out of that whole outfit of 138 colonies only 23 could handle two supers each. All were on Langstroth frames, and all had the same show, one with another, to get there. Of course, any short of stores were fed until there was a living on the outside. Our foul brood inspector for this County said he never saw a more uniform lot of bees than the Gallup bees. It is true that the Gallup bees were not all handsome yellow ones; but how about those yellow dollars they put in the pocket over the other bees? They are handsome enough.

Again, Mr. Alley says, "I have spent my whole life in this branch of apiculture, and

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28 cents Cash paid for Beeswax.
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Golden and Leather-Colored Italian, warranted to give satisfaction—those are the kind reared by QUIRIN-THE-QUEEN-BREEDER. Our business was established in 1888. Our stock originated from the best and highest-priced long-tongued red clover breeders in the U. S. We rear as many, and perhaps more, queens than any other breeder in the North. Price of queens after July 1st: Large Select, 75c each; six for $4; Tested Stock, $1 each; six for $5; Selected Tested, $1.50 each; Breeders, $3 each. Two-frame Nuclei (no queen) $2 each. All Queens are warranted pure.
Special low price on queens in lots of 25 to 100.
All queens are mailed promptly, as we keep 300 to 500 on hand ready to mail.
We guarantee safe delivery to any State, Continental Island, or European Country. Our Circular will interest you; it's free.
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30 COLONIES ITALIAN BEES in Dovetailed Hives, 8-frame, self-spacing Hoffman—frames in good condition—at $3.50 a hive; 5 or more hives at $3.00 a hive. One Cowan No. 15, 2-frame Extractor, and a lot of extracting-combs. Address, S. A. MILLER,
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One Queen, $1.00; more than one at the rate of $9.00 per doz. All Breeding Queens.
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now, after 40 years' experience, if I can not rear a queen that will live four months," etc. Now, I do not believe a close observer like Dr. Gallup was, had to rear thousands of queens to learn how to rear a good queen.

S. Q. Conkle.

Orange Co., Calif., Sept. 3.

A Good Report.

I started in the spring with one 3-frame nucleus, increased to 2 colonies, and have taken off 225 pounds of honey. I got 4 stray swarms, and have taken, all together, 463 pounds of honey, all extracted.

John C. Bull.

Porter Co., Ind., Sept. 1.

Poorest Year for Honey.

Yesterday I extracted 150 pounds of honey from 40 colonies. A year ago I had 2300 pounds from 35 colonies.

This has been the poorest year for honey we have had since I commenced keeping bees, 11 years ago. Hans Christensen.

Skagit Co., Wash., Aug. 25.

A Beginner's Report.

Last winter I bought 13 colonies; the unlucky one died, leaving me 12. Seven of the 12 were in box-hives, and I transferred them into frame hives. I now have 28 strong colonies. In July I introduced 12 Italian queens, and all are doing nicely. I have something near 1500 pounds of comb honey.

Henry Co., Ill., Aug. 24. O. L. Hatch.

Bees Have Done Well.

I have 14 colonies. I put 9 into the cellar last fall, and took out 8 last spring. I do not increase much, as I double them and put back most of the swarms, and in this way I get more honey.

My bees are doing finely so far. I have sold 60 pounds of honey at 20 cents per pound, and have about 12 supers that are about ready to take off.

I intend to make more of a business of bees and poultry.

I still want the "Old Reliable."

Luke Simmons.

Pope Co., Minn., Aug. 7.

The Season's Experience.

I have had bees the most of the time for the last 15 years. Sometimes I would have 1 or 2 colonies, sometimes none. I never had any luck until last summer, when the bees did well in storing honey but not in swarming. One colony swarmed, but after I had it hived a few hours they left, and I could not find them. The next day I found one swarm, but it was on July 4 and 5, too late for swarms; then I had two hives which I thought were full of bees, so I forced a swarm out of them. I took the frame with the queen and put it in a hive on the old stand. That worked well; in a few days the new colony had nearly all the bees, but in a week or two the old were very strong. Now the trouble comes. I should have had a queen ready to put in the old hive, but I had none, and left that to the bees. Well, the one got its queen all right, but the others missed it somehow; the other one also had queen-cells, but very short.

After the cells were all opened I looked for a queen, but no queen was to be seen. I looked again and again, but no queen. In about five or six weeks I looked again and found plenty of eggs, but they were scattered, so I thought it was not the work of a queen. In some of the cells were six, eight or ten eggs. By reading what others said I concluded they must have a laying worker, but the eggs hatched; they also have queen-cells. What will become of this thing? I have a queen on the frame in the box that came by mail. I will let her out soon, but I expect she will be killed.

I also had a colony which became queenless last spring, so I bought a queen that was a beauty; she is nearly as yellow as butter.

A. S. Beiler.

Results of the Season.

My bees did very little good last year, and I lost several colonies, but saved 14 to begin with last spring, and they did very well this season. I now have 38, with what I caught in the woods. I think I will get about 1000 pounds of honey, possibly more.

I will just give a history of a swarm that came to me about the last of May. They have filled two supers and the third one nearly full, and cast two swarms. The first one has filled one super and has the second nearly full, and the second swarm has the first super just about ready to take off; so I will get about six supers of honey, or nearly 144 pounds. I think I can safely count on 130 pounds from one swarm. These were part blacks, but mixed with some as bright three-banded bees as you would wish to see, and they are very gentle. George H. Wells.

Johnson Co., Mo., Sept. 2.

CONVENTION NOTICES.

Illinois.—The annual meeting of the Northern Illinois Bee-Keepers' Association will be held in the Court House, in Rockford, Ill., Tuesday and Wednesday, Oct. 20 and 21, 1903. A good program is being prepared, and all interested in bees are invited to attend.

Cherry Valley, Ill. B. Kennedy, Sec.

Utah.—The Utah Bee-Keepers' Association will meet in the City and County Building in Salt Lake City, Oct. 5, commencing at 4:30 o'clock p.m. Among the subjects discussed will be the winter problem and the best method to promote the interest of the State and National Associations. E. S. Lovesy, Pres.

Long Tongues Valuable
South as well as North.

How Moore's strain of Italians roll in the honey down in Texas.

Hutto, Tex., Nov. 19, 1902.

J. P. Moore.—Dear Sir:—I wish to write you in regard to queens purchased of you. I could have written sooner, but I wanted to test them thoroughly and see if they had those remarkable qualities of a three-banded Italian bee. I must confess to you I am more surprised every day as I watch them. They simply "roll the honey in." It seems that they get honey where others are idle or trying to rob; and for gentleness of handling, I have never seen the like. Friend E. R. Root was right when he said your bees have the longest tongues; for they get honey where others fail. I will express my thanks for such queens. I am more than pleased. I will stock my out-apiaries next spring with your queens.

Yours truly, Henry Schmidt.

The above is pretty strong evidence that red clover is not the only plant which requires long-tongue bees to secure the greatest quantity of nectar.

Daughters of my 23-100 breeder, the prize-winner, and other choice breeders: Untested, 75 cents each; six, $4.00; dozen, $7.50. Select untested, $1.00 each; six, $5.00; dozen, $9.00. Safe arrival and satisfaction guaranteed. Circular free. I am filling all orders by return mail, and shall probably be able to do so till the close of the season.

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White Clover	1.50	2.80	6.50	12.50
Alfalfa Clover	1.00	1.80	4.25	8.00

Prices subject to market changes.

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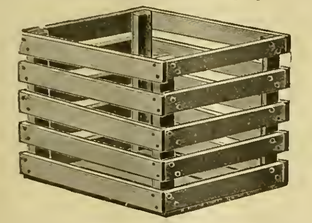

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Bee-Keeper's Guide, or Manual of the Apiary, by Prof. A. J. Cook, of Pomona College, California. This book is not only instructive and helpful as a guide in bee-keeping, but is interesting and thoroughly practical and scientific. It contains a full delineation of the anatomy and physiology of bees. 544 pages. 295 illustrations. Bound in cloth. 19th thousand. Price, $1.20.

Langstroth on the Honey-Bee, revised by Dadant.—This classic in bee-culture has been entirely re-written, and is fully illustrated. It treats of everything relating to bees and bee-keeping. No apiarian library is complete without this standard work by Rev. L. L. Langstroth—the Father of American Bee-Culture. It has 520 pages, bound in cloth. Price, $1.20.

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Scientific Queen-Rearing, as Practically Applied, by G. M. Doolittle.—A method by which the very best of queen-bees are reared in perfect accord with Nature's way. Bound in cloth and illustrated. Price, $1.00; in leatherette binding, 60 cents.

Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—It is nicely illustrated, contains 160 pages. Price, in cloth, 75 cents; in paper, 50 cents.

Advanced Bee-Culture, Its Methods and Management, by W. Z. Hutchinson.—The author of this work is a practical and entertaining writer. You should read his book; 90 pages; bound in paper, and illustrated. Price, 50 cents.

Bienen-Kultur, by Thomas G. Newman. —This is a German translation of the principal portion of the book called "Bees and Honey." 100-page pamphlet. Price, 25 cents.

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Dr. Howard's Book on Foul Brood. —Gives the McEvoy Treatment and reviews the experiments of others. Price, 25 cents.

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Foul Brood Treatment, by Prof. F. R. Cheshire.—Its Cause and Prevention. 10 cts.

Foul Brood, by A. R. Kohnke.—Origin, Development and Cure. Price, 10 cents.

HONEY AND BEESWAX

MARKET QUOTATIONS

Chicago, Sept. 8.—Honey is coming to market quite freely, and is of first quality. This fact induces the trade to take it, and people are of the opinion that it is going to be reasonable in price—two factors which go far toward marketing the product. Best grades of white comb honey sell at about 14c per pound. Extracted, 6½@7½c, according to quality and package; amber grades, 5½@6½c. Beeswax, 30c.
R. A. Burnett & Co.

Kansas City, Aug. 25.—Receipts of comb honey more liberal; demand improving. We quote fancy white comb, 24 section case, $3.25; No. 1, white amber comb, 24-section case, $3 00; No. 2, white amber comb, 24-section case, $2.75; Extracted, white, per lb., 6½c; amber, 5½@6c. Beeswax, 25@30c. C. C. Clemons & Co.

Albany, N.Y., Sept. 4.—Demand for honey improving, at 15@16c for fancy white comb; 14@15c for No. 1; 13@14c for No. 2. Production of honey in this vicinity is very light. This market will have to depend on other sections more this season than ever. Extracted honey, 7@7½c for white; 6@6½c for mixed and buckwheat. Beeswax, 28@30c. H. R. Wright.

Cincinnati, Aug. 6—The supply about equals the demand for extracted honey. We are selling amber extracted in barrels from 5½@6½c, according to quality. White clover, barrels and cans, 7@8½c, respectively. Comb honey, fancy, in no drip shipping cases, 16@16½ cents. Beeswax, 30c. The Fred W. Muth Co.

New York, Sept. 8.—New crop comb honey is beginning to arrive more freely, and the demand is good for all grades. We quote fancy white at from 14@15c, No. 1 at 13c, amber at from 11@12c; no buckwheat on the market as yet.

Extracted is plentiful, and in fair demand at 7c for the white, 6@6½c for the light amber, 5@5½c for dark. Southern in barrels at from 55@65c per gallon, according to quality. Beeswax is declining, and nominal at from 28@29c.
Hildreth & Segelken.

Cincinnati, Aug. 8.—New honey is now offered very freely, particularly extracted. The demand for honey is about as usual at this time of the season. I made sales at the following figures: Amber, 5@5½c; water-white alfalfa, 6½c; fancy white clover honey. 7@7½c. Comb honey, fancy water-white, brings from 14@15c. Beeswax, 27@30c. C. H. W. Weber.

San Francisco, July 22.—White comb honey, 11½@13½c; amber, 8@10c. Extracted, white, 5¼@5 c; light amber, 4¾@5c; amber, 4¼@4½c; dark, 3¾@4¼c. Beeswax, good to choice, light, 27½@29c; dark, 25@26c.

This season's crop is not only unusually late, but is proving much lighter than was generally expected. While the market is unfavorable to buyers, the demand at extreme current rates is not brisk and is mainly on local account.

WANTED! FANCY COMB HONEY In no-drip shipping-cases. Also Amber Extracted in barrels or cans. Quote your best price delivered Cincinnati. The Fred W. Muth Co.
32Atf Front and Walnut, Cincinnati, Ohio.

WANTED—Comb Honey in quantity lots. We are perhaps the only dealers in this article owning as much as 150,000 pounds at one time. Please state quantity, quality and price asked for your offerings. Thos. C. Stanley & Son.
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WANTED—Extracted Honey.

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TO BUY—White Clover Comb and Extracted HONEY—also Beeswax. Spot cash. Address at once, C. M. SCOTT & CO.
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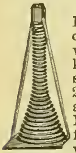

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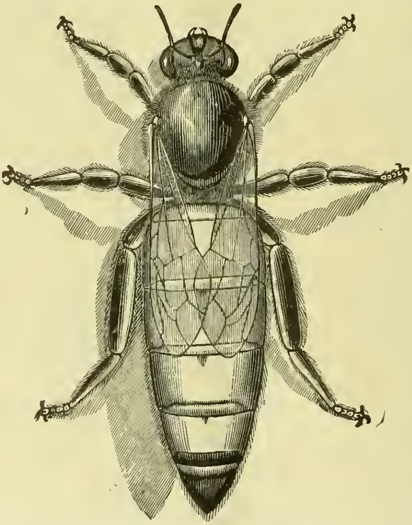
RED CLOVER HONEY-QUEENS.



SPRING BLUFF, WIS., July 18, 1903.
THE A. I. ROOT CO., Medina, Ohio.

Dear Sirs:—I thought I would write you a few lines in regard to the Red Clover Queen I got from you. They haven't swarmed yet this summer, but I have taken 48 sections from them and there is 24 more all ready to come off.

Just think, 72 nice sections of as nice honey as ever was made, and only July 18th. It seems as though they will surely fill 48 more.

I don't know whether their tongues are any longer than any of the others, or whether they gathered it from Red Clover, but surely such bees are worth money.

I use the 8-frame Jumbo frame.

C. E. KELLOGG.

C. E. KELLOGG, Spring Bluff, Wis.

Dear Sir.—We have yours of July 18th and would be glad to have you advise us by return mail with reference to the capping of the honey. Some parties say the capping from these bees is not white, and we would be glad to have you advise us how your honey is in this respect, and oblige, Yours truly,

THE A. I. ROOT CO.

SPRING BLUFF, WIS., July 31, 1903.
THE A. I. ROOT CO., Medina, Ohio.

Dear Sirs:—Yours of July 24th at hand to-day. In regard to your question in reference to the cappings of the honey from these bees I will say that it is simply perfect, beautiful snow-white and every box perfect. 96 one-pound sections now. I am quite sure they will fill two more supers, which will bring the number up to 144. I would like very much to have you see a few of those sections, and I will be glad to send you a few.

Now, I haven't told you ALL their good qualities yet. I am sure they are by far the most gentle bees to handle I have. I could take off the sections without smoke or veil without getting stung.

There are a few traits about them that seem to me are quite remarkable aside from their honey-gathering; they don't seem to want to swarm.

I will write you again in a few weeks and let you know if they fill the 144 sections, which I am sure they will. Respectfully, C. E. KELLOGG.

AGAIN READY FOR PROMPT DELIVERY.

We were snowed under with orders for a few weeks, but here we are agai with good Queens and prompt service.

Red Clover and Honey Queens.

	Each.	Six.		
Untested	$1.00	$ 5.70	Breeding	$5.00
Tested	2.00	11.40	Select Breeding	7.50
Select Tested	3.00	17.10	Extra Select Breeding	10.00

With any of the last three we include one frame of bees and brood to insure safe arrival, for which we make no charge. These must be sent by express. Queen circular free.

THE A. I. ROOT CO., Medina, Ohio.

AMERICAN
BEE JOURNAL

43d Year. CHICAGO, ILL., SEPT. 24, 1903. No. 39.

WEEKLY

APIARY OF F. L. YOUNGMAN, OF MONTCALM CO., MICH.
(See page 612.)

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The book contains 328 pages, is bound in handsome cloth, with gold letters and design; it is printed on best book-paper, and illustrated with over 100 beautiful original half-tone pictures, taken by Dr. Miller himself. It is unique in this regard.

The first few pages of the new book are devoted to an interesting biographical sketch of Dr. Miller, telling how he happened to get into bee-keeping. Seventeen years ago he wrote a small book, called "A Year Among the Bees," but that little work has been out of print for a number of years. While some of the matter used in the former book is found in the new one, it all reads like a good new story of successful bee-keeping by one of the masters, and shows in minutest detail just how Dr. Miller does things with bees.

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AMERICAN
THE OLDEST BEE-PAPER IN AMERICA
BEE JOURNAL

43d YEAR. CHICAGO, ILL., SEPT. 24, 1903. No. 39.

Editorial Comments

Don't Let Your Colonies Starve.—The colonies that have given the largest amount of surplus may be the ones that have the smallest amount of honey for winter. To be sure, they may have an abundance, but the very fact that they have done so well in the supers suggests that they have put all above, and if they have kept the brood-chamber filled with brood till late, they are the very ones that may starve. After doing such good work for you in surplus, it would be too bad to let them starve, wouldn't it?

Select Your Colonies to Breed From.—No, it isn't the wrong time of the year to decide the matter for next year. The performance of each colony is more fresh in your mind now than it will be next spring. If you cellar your bees, there is some danger that they will be all mixed up, and that next spring you won't know which is which. If you are wise, however, each hive will be numbered, and you will have kept an exact account of the performance of each colony, making it not so very hard to decide which colony, all things considered, is the one that you want to rear queens from next year.

Select Your Drone-Breeders.—That may sound like strange advice to some whose chief thought with regard to drones has been the thought of entire suppression. To be sure, it is a good thing to discourage the production of a lot of useless consumers, but it may be well to suggest to you, oh, inexperienced beginner, that not *all* drones are useless consumers. A few are absolutely necessary, if you are to continue in the bee-business, and it is of highest importance that these be of the best stock. So, besides selecting the best colony from which to breed your queens, select one or more other colonies in which you will encourage the rearing of a considerable number of drones. Now is the time to make such selection.

Foul Brood at the Chicago Convention.—There appears in a German bee-journal the statement that at a bee-convention held in Chicago foul brood was much discussed, the sentiment prevailing that fire was the only safe remedy, one bee-keeper asserting that out of 667 infected colonies he had saved only three.

Our good German friends may be assured there is some mistake. Although fire might be the advisable thing where only one or two colonies were diseased, no one would advise it where a considerable number of colonies were attacked. Thousands of colonies have been successfully treated without resorting to such heroic measures as burning.

An Extractor for Extracting Sections has often been inquired for. So far as we know there is no special machine made for that purpose. But for a few cents any of the common honey-extractors can be fixed to extract honey from sections. Here is one way to do it:

Go to any tinner, and have him make a tin shelf, say 1½ inches wide and 6 inches long. Then have a wire hook about 6 inches long fastened to the center of each end of the tin shelf, so as to be able to drop it into the comb-basket of the extractor, hooking the two wires over the outer edge. Then the sections can be put on this tin shelf, one at a time, after uncapping them, and the honey thrown out.

It would be well to have a tin shelf for each comb-basket of the extractor. Years ago, we believe these tin shelves (as we call them) were furnished with the extractors. At least that is where we got the idea. We do not claim any originality in the matter, but know it will work.

A Severe Case of Stinging is reported in Praktischer Wegweiser. In an ungarded moment a child of 18 months wandered into the apiary. Attracted by her cries, her father found her with her face, ears, neck, head, and hands covered with stings. In greatest haste he removed the stings, put the child in a bath-tub filled with cold water, and continuously, for half an hour, poured upon her cold water from the well. After the bath the stung parts were bathed with vinegar. Then the mother put the child in bed, and warmed the shivering body with the heat of her own body. Sleep soon ensued, and when the child awoke, a few hours later, it was quite lively. There was no swelling, and no evil after-effects from the intense cold of the bath.

It would not be difficult to try the same cure in less severe cases—continuous pouring of cold water followed by the application of vinegar. Possibly it would not always work so well.

"The Queen-Bee and the Palace She Should Occupy" is the title of a work of 75 pages, written by T. K. Massie, the said "palace" being the "Massie Ideal Hive," invented by the author. This hive, he announces, "is the only hive in existence which is complete in itself. It has more good principles, and fewer objectionable features, than any other." It is "decidedly the best hive ever made," and the "greatest labor-saving hive in existence."

At the outset the author declares himself in opposition to having anything as "standard," his book being dedicated to "that progressive spirit of American apiculture which recognizes no 'standard.'" Something like 20 pages are occupied with queen-rearing and kindred topics. The remainder of the work is devoted, in most part, to instruction in bee-keeping, as practiced by the author with his hive. Those who use "Massie's Twentieth Century Combined Ideal Bee-Hive" should secure this book.

Screens for Apiaries.—Those who wish to keep bees in towns or cities have a problem to meet that does not concern the man whose bees can be located at safe distances from any highway. Unless special precautions are taken, the bee-keeper with only a small city lot, and with neighbors close about him on all sides, is pretty sure to get into trouble on account of an occasional sting inflicted upon a passer-by. A board fence, 7 or 8 feet high, will put the flight of the bees above the danger-line. Such a fence, however, is not a very sightly affair. Mr. Wm. Duncan has solved the problem by means of a living screen.

It is not a very difficult matter to establish such a screen. For its basis a fence of poultry-netting; then vines to cover the netting, and your screen may be made a thing of beauty. Among the vines that may be used for immediate effect may be mentioned, morning-glory, nasturtium, wild cucumber, Madeira-vine, hop-vine, etc. At the same time, if desired, there are other vines that can be started for a more permanent effect, such as grape-vine, Virginia creeper, or American ivy, etc.

Miscellaneous Items

Mr. A. P. Raught, of Lake Co., Ill., called on us Sept. 16, and reported the best season he has ever known. He started with 4 colonies last spring, increased to 10, besides losing one prime swarm, and had taken off 640 pounds of the finest white clover comb honey, which likely would be increased to 700 pounds by the end of the season. He was mostly smiles when we saw him.

Tyler Bros. (three of them) recently shipped to Paris, France, two car-loads of fine alfalfa honey in 60-pound cans, from their Nevada apiaries. The price received for the honey was 5½ cents a pound, f. o. b. starting point. This is $110 a ton, or $2640 for the two cars. America can easily help to sweeten the people across the seas. And when they once get a taste of that delicious alfalfa honey, they will want more of it. At least that is the way it works with this pencil-shover.

The Apiary of F. L. Youngman appears on the first page this week. It is located in an orchard, and consists of 120 colonies, all in the Hilton chaff hives, which, he thinks, is an ideal hive for a cold country. In fact, Mr. Youngman thinks they are better for the bees in the summer, as the chaff walls keep the hot sun from the brood-nest, thereby letting the bees work during the hot part of the day, instead of hanging on the outside, as they do on a single-walled hive.

Mr. Youngman used, for the first this year, the plain section and fence, and found them the finest thing in the shape of honey sections he had ever used. He says they are more easily cleaned, give the bees better access through the super, and make, when filled, a clean and neat looking piece of honey.

The honey-flow, in his locality, was better this season than it had been for years. The raspberries, white clover, basswood, buckwheat, and fall flowers gave a long honey-flow, and made the bee-keeping business one of profit as well as pleasure for him.

The Grand Canyon of the Colorado River, in Arizona, 65 miles north of Williams, we had been told, is a wonderful sight. In last week's issue we had just arrived at Williams, and were about to start on the side-trip to see the biggest hole in the ground, we suppose, there is anywhere in the world.

At Williams, Mr. S. W. Barnes, the genial Traveling Freight and Passenger Agent of the Santa Fe railroad, got aboard. It was his duty to answer questions and make everybody feel happy. He seemed to enjoy his work. At least he didn't act as if it disagreed with him. Of course, he knew everybody and everything all around the Grand Canyon. So he was a handy man to have on board. He talked as if he thought the Santa Fe was the greatest railroad going through the greatest part of the country in all the world. And Grand Canyon—well, that would have to be seen in order to be appreciated!

It was nearly 7 p.m. when we arrived at the Grand Canyon, early enough to get a good view of it before dark. We all walked up to its edge, or rim, and—looked. Well, there is no doubt about its being a big hole. It is wonderful. There is no use in any one trying to describe the Grand Canyon of the Colorado. One might as well attempt to tell all about the Rocky Mountains, or all about the United States, or all about bee-keeping, or any other impossible thing.

We were told that the Canyon, at that particular point, is 13¼ miles wide, and about one mile deep. But it didn't seem so. Some of us just knew it couldn't be posiible. But it wouldn't do to get too contradictive, or one might get pushed off the edge of that almost bottomless pit, and then it would be good-bye forever.

It was Saturday night. And no barber-shop within 65 miles. What were the rough-bearded ones to do? No shave since the Wednesday before, when leaving Chicago. We were about to give up the idea of shaving, and thus be more in accord with the wild and dreary place in which we were stopping, when we were informed that the two city young men who had started out with the bee-keepers' car were barbers, and had their tools with them. One end of the tourist car was soon transformed into a barber-shop, and the car seats used as barbers' chairs. While one young man lathered the stubby faces, the other did the "scraping," and soon all were smoothly shaven—at 25 cents each!

The young barbers made so much that they decided to leave the next forenoon instead of waiting until Monday. So that was the last we saw of our "jolly barber boys."

It was arranged amongst us to hold a religious service in the hotel parlor on Sunday morning, at 6:15 o'clock, where there were a good supply of comfortable chairs and a first-class piano. We had taken with us a couple song books, as well as some other special music. Mr. and Mrs. Tallady had also brought a Sunday-school singing book. Familiar songs were selected, so that few books were needed. Mrs. York played the piano, and her smaller half managed the program.

After singing one or two inspiring songs, Dr. Miller was called on to read the scriptures and offer prayer. Then another song, after which A. I. Root acted as preacher and talked to those present on, "In all thy ways acknowledge Him, and He shall direct thy paths." He didn't talk long, so no one went to sleep. It was really a helpful discourse, and made all feel better to start the day in that delightful way. After a duet by the pianist and program manager, and also a hymn by the "congregation," N. E. France closed the service with prayer.

Then all went to breakfast.

But after breakfast, what was to be done? Dr. Miller and the women-folks evidently decided to take things easy, and rest. But Mr. Root was as uneasy as a cat in a strange garret. He wanted to go down the trail into the Canyon. And yet he couldn't quite think it in exact accord with the command, "Remember the Sabbath day to keep it holy." But the more he thought about it the more he felt he ought to walk down into that Canyon, even if it was Sunday. Others were going, some on horseback, or muleback, and some a-foot. It was too much. He simply *must* get down into that Canyon, and also be first to "get there." It seemed too bad, after coming so far, and spending so much good money! to reach only the *rim* of it, wouldn't do at all.

So off he started—down the trail—the liveliest boy of all. In fact, he led the party that walked. Among them were the writer, Tallady, Schneider, Moe, and Woods. And Mr. Hyde rode a horse, at $4.00 for the round trip.

We wish we could tell our readers all about that trail or single-file path that zigzags down the Canyon. Just imagine walking down the edge of an almost straight-up-and-down hill for about four or five miles, in a dusty, much-traveled path, and you can have a little idea of what it meant. It took about two hours to reach the table-land below, which was still 1500 feet above the waters of the Colorado River. We all went only to the rocky bank of the river, which was 1000 feet almost directly above the water, which looked about a rod wide below, when, in reality, it was 500 feet! The water is muddy, and rushes along at a rapid rate.

About a 20-minute walk back from the place where we saw the river running through the deep gorge, are nine white tents, where people can remain all night if they wish. From the top of the Canyon all of these tents together look about the size of two ordinary handkerchiefs. One can also get a meal here if he so desires. Several of us did so, after taking a short nap. And then came the walk and climb back to the hotel at the top of the Canyon. It still makes us tired to think of it. It was a sultry Sunday afternoon. And down in that old hole—oh, how hot it was! Not a breath of air! And to climb several miles on a criss-cross, dusty, narrow mule-path—do you wonder that the effort was almost too much for some of us—especially for those who had been used to sitting at an office-desk? Several times we thought we would have to stop, and send for a horse or mule to take us up and out. Mr. Root, as well as several of the others of the party, were also winded pretty badly. But Mr. Woods and the writer pushed on, resting often, and finally got so far ahead of the others that we feared possibly Mr. Root had given out, or else some one else. We feared so much for Mr. Root that when we did finally reach the hotel we ordered a guide and horse to go and meet him at once. They did so, and soon came up with him and the rest of the party. (But Mr. Root said afterward that he could have made the trip all right without the aid of the horse.)

It would be utterly impossible for us to describe adequately the Grand Canyon. In fact, so far as we know no one has been equal to that task. But in a book called "The Titan of Chasms," the author has this to say:

> "Stolid, indeed, is he who can front the awful scene and view its unearthly splendor of color and form without quaking knee or tremulous breath. An inferno, swathed in soft celestial fires; a whole chaotic under-world just emptied of primeval floods and waiting for a new creative word; eluding all sense of perspective or dimension, outstretching the faculty of measurement, overlapping the confines of

definite apprehension, a boding, terrible thing, unflinchingly real, yet spectral as a dream. The beholder is at first unimpressed by any detail, he is overwhelmed by the ensemble of a stupendous panorama, a thousand square miles in extent, that lies wholly beneath the eye, as if he stood upon a mountain peak instead of the level brink of a fearful chasm in the plateau, whose opposite shore is 13 miles away. A labyrinth of huge architectural forms, endlessly varied in design, fretted with ornamental devices, festooned with lace-like webs formed of talus form the upper cliffs, and painted with every color known to the palette in pure transparent tones of marvelous delicacy. Never was picture more harmonious, never flower more exquisitely beautiful. It flashes instant communication of all that architecture and painting and music for a thousand years have gropingly strived to express. It is the soul of Michael Angelo and of Beethoven.

"A canyon, truly, but not after the accepted type. An intricate system of canyons, rather, each subordinate to the river channel in the midst, which, in turn, is subordinate to the whole effect. That river channel, the profoundest depth, and actually more than 6000 feet below the point of view, is in seeming a rather insignificant trench, attracting the eye more by reason of its somber tone and mysterious suggestion than by an appreciable characteristic of a chasm. It is perhaps five miles distant in a straight line, and its uppermost rims are nearly 4000 feet beneath the observer, whose measuring capacity is entirely inadequate to the demand made by such magnitudes. One can not believe the distance to be more than a mile, as the crow flies, before descending the wall or attempting some other form of actual measurement.

"Mere brain knowledge counts for little against the illusion under which the organ of vision is here doomed to labor. Yonder cliff, darkening from white to gray, yellow, and brown as your glance descends, is taller than the Washington Monument. The Auditorium in Chicago would not cover one-half its perpendicular span. Yet it does not greatly impress you. You idly toss a pebble toward it, and are surprised to note how far the missile falls short. By and by you will learn that it is a good half mile distant, and when you go down the trail you will gain an abiding sense of its real proportions. Yet, relatively, it is an unimportant detail of the scene. Were Vulcan to cast it bodily into the chasm directly beneath your feet, it would pass for a bowlder, if, indeed, it were discoverable to the unaided eye.

"Yet the immediate chasm itself is only the first step of a long terrace that leads down to the innermost gorge and the river. Roll a heavy stone to the rim and let it go. It falls sheer the height of a church or an Eiffel Tower, according to the point selected for such pastime, and explodes like a bomb on a projecting ledge. If, happily, any considerable fragments remain, they bound onward like elastic balls, leaping in wild parabola from point to point, snapping trees like straws; bursting, crashing, thundering down the declivities until they make a last plunge over the brink of a void; and then there comes languidly up the cliff sides a faint, distant roar, and your boulder that had withstood the buffets of centuries lies scattered as wide as Wycliffe's ashes, although the final frangment has lodged only a little way, so to speak, below the rim. Such performances are frequently given in these amphitheaters without human aid, by the mere undermining of the rim, or perhaps it is here that Sisyphus rehearses his unending task. Often in the silence of night some tremendous fragment has been heard crashing from terrace to terrace with shocks like thunder-peal.

"The spectacle is so symmetrical, and so completely excludes the outside world and its accustomed standards, it is with difficulty one can acquire any notion of its immensity. Were it half as deep, half as broad, it would be no less bewildering, so utterly does it baffle human grasp."

Well, *we* had seen the Grand Canyon. And we will never forget it. Oh, how our legs ached! Why, for several days afterward we could scarcely walk. We preferred to sit down and take it easy. Even after getting to Los Angeles we could scarcely go up and down stairs. Mr. Root didn't complain any, but we knew from the way he walked—sort of softly like, as if fearing to step on a nest of eggs—he must be pretty stiff and sore.

It had been announced that in the evening there would be a praise service in the hotel parlor. So at about 7:30 a number gathered again and sang for an hour. And so closed a Sunday at the Grand Canyon.

But, hold on! it wasn't closed, either, for it was reported that one of our bee-keepers was missing! Think of it! He might have fallen over the precipice into the Canyon!

It was Mr. Kluck. Some one had seen him start down the trail at 5 p.m. It was now 9 o'clock, and no Mr. Kluck could be found. Mrs. Kluck was worrying about him greatly in the car. So we and some others began to consider starting a searching party down the Canyon.

By the way, there is a private telephone that connects with the tents down in the Canyon below. But after much vigorous ringing it was impossible to raise any one at the lower end, so we could not inquire whether or not Mr. Kluck had been there.

But in a little while who should come stomping in but Mr. Kluck himself? He had walked down to the tents and back since 5 o'clock! It must have been a very dangerous trip after dark.

We felt quite certain Mrs. Kluck would settle the matter with her re-discovered partner just as soon as she found a suitable time and place. He will hardly runaway again—not soon. He seemed quite willing to sit very still all the next day, evidently meditating—and resting his tired legs.

It was during a meal at the Grand Canyon hotel that Mr. Root turned to a young lady boarder, who had just seated herself beside him at the table, and said, "Can I have some pudding?" He evidently was in deep meditation, and thought it was a waitress who had just come his way. The young lady didn't get him any pudding!

During both nights at the Canyon we were awakened by the most unearthly sharp cries, or barks, we had ever heard. We at first thought it might be Indians, but discovered later that it was a bunch of coyotes holding a midnight "convention." Evidently one of their number was trying to introduce some amendments to the Constitution, and the rest of the crowd objected, and all spoke at once! We don't say that was really the cause of their trouble, but surely there was trouble, if we might judge from the coyotic sounds that pierced the midnight air.

On Monday morning, at 9:15, the car started back to Williams, arriving there about noon. Next week we will go on to Los Angeles.

Convention Proceedings

The Los Angeles Convention.

Report of the Proceedings of the 34th Annual Meeting of the National Bee-Keepers' Association, Held at Los Angeles, Calif., Aug. 18, 19 and 20, 1903.

(Continued from page 598.)

Mr. J. A. Reed then spoke as follows, on

THE CITRUS FRUIT EXCHANGE—ITS WORK AND METHODS.

I will say, to begin with, that the citrus fruit industry dates back quite a number of years in Southern California. Some 12 or 15 years ago, when I first commenced to know something about this industry, there were, comparatively speaking, few oranges shipped from Southern California. The men who owned oranges in those days had little difficulty in selling them. It was the custom then to go out and examine a man's orchard, see about how many oranges he had, and then make him a lump offer for his orchard. There were a good many buyers in the field; they had money, and it was a speculative business. That was by the commission men, and these men paid them good returns.

It was not difficult at all to sell oranges in those days, because there were a good many buyers in the field, they were competing against each other, and there were, comparatively speaking, very few oranges. The demand was more than the supply. But on account of the prices they received for their oranges, there was no inducement for men who came here with money to set out orange groves.

In a few years, from shipping a few thousand cars, we had anywhere from 15,000 to 16,000, and after a few years we had 26,000 car-loads shipped out of Southern California. When the oranges began to increase, we found that the buyers were not nearly so anxious to buy. One reason was, that they could not make as good profits as they had been doing; another reason, they said, was that the orange growers were like all other growers all over the United States—they were not business men, were not capable of handling their own business. All they could do would be to organize to look after their products in the East.

There was an organization formed, the object of which was to do away with competition from the buyers, and they laid out certain districts, simply took and handled the fruit for us, and made the grower as good returns as their conscience would allow them. Several years ago, the more oranges they grew the poorer the grower became at the end of the season. On man, of whom I can tell you, had a good crop, 12 car-loads, and when he got through the first year's business he owed the firm $1800 for the privilege of growing and shipping. This is one instance.

In order to assert their rights, and get something for their labor, they realized they must organize, that they must get together, and co-operate, and the only way to co-operate was to get every grower who would join in with the co-operation, and the question came up, How best to organize? In producing honey, I do not suppose there are near the difficulties that there are in the orange business, for this reason: All over Southern California we have different climates, different soils, and it does not make any difference where you go, which one of these localities, that was the one which was producing the *best* oranges that could be grown. A man would say, "I am not going to pool my fruit with any man down below Los Angeles, where they produce dirty, cheap trash." Another said, "I am not going to come in, for I have the finest fruit grown." Another said, "We have no black scale, our fruit don't need washing, don't need any cleaning." We found the best way to do was to organize them into localities, let each locality have its own organization, and let each organization be composed of the growers.

A great many organized on the basis of acreage, claiming that a man who had 100 acres had more right to say what the association should be than a man that had 10 acres. There were a number of the different local associations organized on the basis of acreage, and others on the number of boxes produced; it did not make much difference how they organized, so that they got together and organized and co-operated. The difficulties that came up were these:

"Why, you have got nobody connected with your organization that knows anything about selling fruit." But we did have men here who had business training, business sense, and they got together and said to the orange growers of Southern California, "We certainly have men who have business ability, and being orange growers they certainly can manage and run our business for us."

A great many said, "It never will succeed, because we did not go out and employ the so-called commission man, who had for years run this business, and get them to run it." But we said, "No; it was right that the orange growers should be the men to manage their own business."

We started with organizations in different places. There were many sections that did not organize. Many said we will just lay back and take advantage of these fellows who are going to do so many wonderful things; we will sell our fruit, and let them hold theirs, and see who is the loser. So, no completed organization was effected, and we thought best to do this: Make an organization in each locality; let that organization look after the local part of the work; let it be composed of the growers that are directly interested there. And that was done.

Local organizations came together and incorporated, and after they incorporated one said, "It is pretty hard to transact business." So we found it best to have the local organization responsible for the material which it bought, and also responsible to its individual growers (members). Then we found these organizations had to be bunched together in district exchanges. Each county was entitled to one. Wherever there was a large enough acreage in the county we allowed two or three in the county. A number of these local exchanges said: "We must have a head to us." Therefore they got together and selected one man from each one of them, and they elected one member a director in the Southern California Fruit Exchange. They got together, that is, and elected one man to represent that locality at the Exchange. Then the exchanges got together, and from their number, the directors selecting one to the Southern California Fruit Exchange. This was called the head of the institution, and that was made up of six different exchanges, comprising citrus fields from Taylor County on the north as far as San Diego County on the south, including Santa Barbara, Ventura, and all the different counties within that district.

We adopted a method that had been in vogue among the commission sellers, seeing that the only way to sell was to sell in the manner in which they sold heretofore. We followed them for a year, but found that it was not the thing to do. We then sold our oranges on what was called the f. o. b. plan, but we found that did not work successfully in the interests of the grower; therefore we abandoned that, and adopted a new plan and called it selling the fruit delivered. We ship our fruit, and have for some six years under that plan. The plan is this:

We get the local organization to say how many car-loads of fruit, when the fruit is ready to go, and when they want to ship it. The different localities vary in that, and we have to work and protect as far as possible each locality. The local association employs the labor that is necessary to put the fruit on board the cars. They then turn around and deliver the fruit to the local exchange, and the local exchange bills it to the Southern California Fruit Exchange, and they employ an agent in the East, and they look after the general part of the selling. That makes the selling of it no difficulty, if it is all under one head. We found that the only way we could do, instead of hiring men in the East that were directly interested in the sale, was to hire men that were competent salesmen, pay them good salaries, put them under bond, and allow them to sell the fruit to the highest market price as fast as it was shipped to them. And we have been successful. For I say to you that there is no organization in the world composed of producers that has the reputation for doing anything like what the Southern California Fruit Exchange has done.

Not counting this year, but five years previous to this year, we tranacted a business of $25,000,000, and our financial losses were less than ¼ of 1 percent—somethiug. If you will ask your bankers East, or any place, to give you a record of anything of the kind, they can give you nothing, because it is a wonderful record.

The California Fruit Exchange is made up of producers that have been successful. There were always some growers that would not unite with the Southern California Fruit Exchange, and that would rather sell their fruit on board cars in California than to ship to Eastern markets and take their chances there. We issued a circular for years, showing that we could show better results than selling f. o. b. California, for this reason: In shipping East we did away with trying to encourage the producer to gamble on the future. No class of farmers make a greater mistake than those who are trying to speculate and gamble. Grow your product; put it on the market, and that is all the producer is entitled to. If he undertakes to hold it one year, or two years, or three years, he is gambling, and it spoils him if he once wins, generally speaking.

This exchange has done more towards helping the industry than anybody not familiar with the facts can realize. I remember in the bank where I was engaged, that it was almost always slow money on orange land. The first question asked was, "What did you realize for your crop last year?" and the majority had to acknowedge that they realized nothing out of their crop.

How can you expect to borrow when you can not show how you are going to pay interest? You can not do it. As soon as the organization was effected, the banks all over Southern California came to the association, and said: "If you have any growers who desire any money advanced to them on their crop, we are willing to advance any reasonable amount of money." Within two years it was altogether a different proposition to go to the bank and borrow money, from what it had been. I claim it was altogether on account of the organization, because it placed the industry on a sound basis.

Of course, there is always more or less trouble and dissatisfaction in any organization of this kind. Each man, whether a producer or a seller, has a part to perform, and unless he does his part, and does his part well, you can not expect good results; but, almost invariably, if you will give me any cause of dissatisfaction or trouble, I will show you that the trouble has been that some one has neglected to do what is right, and to do his duty. If the grower will grow his fruit, put it on the market, he has done what he can; then leave it to the selling agents.

I want to say that on account of a good many of the growers not coming into the Southern California Fruit Exchange, on account of about 50 percent of them always wanting to sell their fruit f. o. b. California, there is always a good deal of competition coming up. For instance, there was about 50 percent of the fruit acreage right in competition with the grower, and the growers themselves were the worst enemies that the organization had in competition, because the commission merchant found he could ship his next door neighbor's fruit and compete with us.

I will speak of the Exchange selling fruit in competition with the outside shipper. If he can get his money he has done his part, and the other fellow must take the chances and risk. Every man does that who goes into the market. We do, and, of course, if he can not sell it one way he will sell it another.

One of the easiest ways to sell fruit is to cut the price—that is, a great many people believe that, and almost as soon as our car strikes a market, there is another car on the track. We have a great many times met competition, and sometimes have cut the price. A proposition came to us last winter to do away with the cutting of prices. The outside shippers got together and formed what is now called the California Citrus Union. They came to the Exchange and said, "We do not want our growers to give up their idea of selling their fruit. We want to come with you and form what is known as an agency, so that nearly all the product can be sold through one medium."

In April last we formed what is known as the California Fruit Agency, which was a combination of the two. The outside shippers forming themselves together and fixed the prices for packing and putting the fruit on board the cars, thereby becoming nothing but packers virtually, and the California Fruit Exchange retaining its membership and running its business as it had been doing.

This last year you may hear of as a disastrous year. I want to say to you it was largely due to two or three facts. We must all admit that sometimes climatic conditions are such that we do not grow as good fruits as others. I do not know whether that occurs in producing honey or not. I suppose it is all sweet, and sticky, and you never have any poor honey. But some years we have better fruit than others, and this last year we didn't have as good fruit by far as the average California fruit. This condition led the growers to believe if they would hold off they could get better prices. A great many growers held off, and all waited until late in the season. A great many were deceived in regard to the amount we had. Up to the first of May we had shipped less, but during the month of May we shipped a larger number of oranges out of California than we had ever shipped before in the history of the industry. It was a mistake to hold back. We missed out on the market, and the consequence was that all over the United States oranges sold lower than for years, and the fruit did not carry as well.

I will venture to say, if you will go over this entire country, you will find that those who have not received good returns can lay it to the fact that they held the fruit and shipped it late. A proper distribution is a wonderful thing for the producer, and if you can so arrange what you produce that you can put it out during the period it is consumed, you can get better results than to crowd it all into a short space of time.

I do not know that I can say anything more to the bee-men, only this: That if the bee-men of this State, or of the United States, would get together on a plan of co-operation, I dare say you will have no trouble in getting good results and good prices for your honey. Without co-operation, I can only see how once in awhile a man can get the results that he would get if all combined and worked together. A single individual may want to stand out. Do not stand out in the organizing because of one or two men that are not willing to come in. If they won't all work together, get together as many as you can, and, if you can, transact your own business, get fair results, and do it at a medium cost.

The old-line packers used to get 45 and 50 percent for putting it on board cars; they used to charge 10 percent commission for handling the fruit. Since the organization of the Southern California Fruit Exchange we have reduced the cost—the net cost. The cost of labor has advanced, material is reduced about 2¼ cents a box, but we have reduced the entire cost 15 to 18 cents a box. That means a saving of hundreds of thousands of dollars to the growers. We have reduced the cost on an average to about 6 or 7 cents per box—the entire cost, I am speaking about; so you can see what we have accomplished by organization, and what we have saved the growers and producers.

If you will organize and select good men to transact your business, there is no reason in the world why the honey-producers of this country should not make as good a record as the orange growers have done in Southern California.

J. A. Reed.

(Continued next week.)

Proceedings of the Texas Bee-Keepers' Convention Held at the A. & M. College, at College Station, July 8 to 10, 1903.

BY LOUIS H. SCHOLL, SEC.

(Continued from page 599.)

TEXAS APICULTURE A PROFITABLE INDUSTRY.

First, I wish to say that, according to the last census, Texas is now the leading State in the production of honey and the value of apiarian products. According to the census, Texas produced, in 1899, 4,780,204 pounds of honey and 159,690 pounds of beeswax, with a value of $468,527. The number of farms reported keeping bees was 60,043, and the number of colonies kept was 392,644. Texas leads in the production of honey by over one million pounds. Bee-keepers from other States are learning of the vast honey-resources of Texas, and are coming every year, and soon I expect to see all the territory covered by bee-keepers. Great numbers of bees are being brought into the State, and all bee-keepers are increasing their present stock, so that it is only a matter of a few years until the territory will be stocked.

The industry is also a profitable one. Colonies yielding from 50 to 150 pounds of honey a year, which sells at from 5 to 9 cents per pound, so that the income is considerable. The value of the yearly increase, and the value of the beeswax, ought to keep up the expenses of the apiary, so that the honey money may be considered as that much above expenses.

The farmer who cultivates one hundred acres in cotton will make, perhaps, if everything is favorable, some 35 bales of cotton, worth about $8.00 per bale profit, on an average, or $280 gain for the year; the stockman, with his 1000 acres, may make $1000 clear in some years. In other years, he has to feed, and low prices for beef cause him to make nothing. The physician may book $3000, and perhaps may collect $1500; the truck-grower may make from $1000 to $2000 in some years on his melons, beans, onions, and cabbage, and then a succession of drouths and he loses all he has made. The lawyer may get some good fees, and make a handsome amount of money. Then, again, in some other years the citizens are so law-abiding that he almost starves to death. But, gentlemen, the bee-man never has a failure, never knows any want, but with his 1000 colonies rarely ever clears less than $5000.

In nearly all parts of Texas bee-keeping pays, yet it pays best in Southwest Texas, where the conditions are especially favorable, and where the flora is best adapted to the bees. Southwest Texas has never known an entire failure, something that can not be said of any other State, to my knowledge. There is always a crop of honey, more or less, so that the industry may be said to be a stable one, and one on which you may depend upon for a good living in Southwest Texas. I believe Southwest Texas to be the best bee-country in the world.

In Southwest Texas there are millions of acres of land on which there are no bees to cover it, and consequently there are millions of pounds of honey going to waste annually. There is plenty of unoccupied territory, and it only awaits the coming of the bee-man with his bees, to be indeed and in truth the greatest honey country on earth.

In coming to Southwest Texas, we would ask that you first come and look for yourself, and then pick an unoccupied location where there will be no kicks from the man who is already established. It is not only not right, but it is pound foolish, to put down bees near another man when there is so much unoccupied territory as there is in Southwest Texas.

In conclusion, I invite all who wish a pleasant and profitable business to come to Southwest Texas and engage in bee-keeping, starting in with a limited number and increasing your bees as you learn the business. We have good faith in the industry in our part of the country, and we invite all doubters to come and see for themselves.

O. P. Hyde.

REPORT OF COMMITTEE ON RESOLUTIONS.

Resolved, That we, the Texas Bee-Keepers' Association, in regular session assembled, extend our thanks to the retiring officers for the faithful way they have discharged their duties.

Resolved, That we request our Secretary to extend all aid possible to organize branch and local bee-keepers' associations, and assist those already organized.

Resolved, That we extend our thanks to Pres. J. H. Connell and Prof. B. C. Pittuck, Secretary, for the faithful way in which they have arranged the entire proceedings, and for their untiring effort to entertain all who attend the meetings of the Farmers' Congress.

Resolved, That we extend our thanks to our entomologist, Prof. E. D. Sanderson, and to his assistant, L. H. Scholl, for the great interest they have taken in our work, and assisting us in every way possible.

Resolved, That we extend our thanks to Prof. F. W. Mally, Prof. E. D. Sanderson, and Prof. Wilmon Newell, for their speeches on thorough organization, etc., and for assisting us in other ways.

Resolved, That every member of the Texas Bee-Keepers' Association feels that we are fully paid for our time and expenses for our visit to the bee-keepers' convention and the Farmers' Congress.

O. P. Hyde,
W. H. White, } *Com.*
Z. S. Weaver,

Contributed Articles

Stimulative Feeding of Bees in Spring.

BY ARTHUR C. MILLER.

ON page 518, Mr. Dadant says he will not write further on the subject. That is to be regretted, for if he will take the pains to go into details, I believe he can shed more light on an, at present, very obscure matter.

His recent articles on the subject give the impression that he is firmly convinced that there is a substantial profit to be derived from such stimulation. Unfortunately, he has failed to give sufficient data to enable the rest of us to go and do likewise, and, when criticised, has resorted to sophistry instead of giving facts and arguments. This may have been unintentional, but generally impresses the reader as being an attempt to save a lost case.

I write this article in the form of a reply to Mr. Dadant, because his articles voice a widely accepted belief, or beliefs, which I consider erroneous. It may be impossible to express myself so that no construction of personal antagonism will be inferred, but I desire solely to get at facts, not to irritate any one.

Frankly acknowledging that colonies may be stimulated to more rapid growth by feeding, I hold, in common with many others, that it is not profitable. Or, to state it differently, other systems of management produce greater gross returns and at a lesser cost.

Before discussing the economy of it, let me allude to what is assumed to be the effect of the food on the life and actions of the individuals comprising the colony.

In Mr. Dadant's article (page 518) I find this: "Feeding enhances breeding because the bees are stirred up by it, and because the queen is *offered* food more plentifully whether it be royal jelly or honey." (My italics). In a previous article, Mr. Dadant said it was nectar.

I assert that bees never *offer* food to the queen, and I know whereof I speak. The bees that show their tongues are *seeking* food, not offering it. The sooner bee-keepers learn this, the sooner they will solve several otherwise troublesome problems.

As I partly explained in my former article, the bees' attitude toward the queen is not one of deference, but one of obedience to two simple laws, *i. e.*, making way for deliberately moving bees, and desire for a particularly palatable food, the odor of which emanates from the queen's body. Mr. Dadant cites the circle about a queen on a comb held in his hand. Such a condition is not normal, and an exposed comb and the customary single-comb observation hive are very poor contrivances for the study of bee-life. If the curious bee-keeper would see the real attitude of workers toward the queen, let him watch her in the crowded clusters between the combs. The bees push her, scramble over her, and stand in her way until her steady movement forces them aside, and even then they won't always move. When she needs food she goes about with her antennæ apparently more active than usual, accosting bee after bee, until at last one is found with the necessary "pap." Sometimes a long "talk" ensues, but when the bee is ready to yield her supply, the queen's tongue advances, and is placed directly in the other bee's mouth, the latter's tongue not having been unfolded at all. Then the "show of tongues" by surrounding bees occurs.

The assumption that the slow and steady supply of food to the colony causes the bees to *offer* to the queen more food, being found to be wrong, how are we to account for the increased laying? The stimulus which incites the queen to lay her first egg (after the winter resting spell) may never be determined, but certainly, as she has deposited an egg, her system calls for a restoration of tissue; this means hunger, slight, perhaps, but still existent. As soon as this hunger becomes great enough it forces her to seek food. At the time we are considering she may, and very probably does, have to apply to many bees before finding any that can supply her even a little "pap." As the number of bees having such supply increases, so the queen's laying increases, *because* she can more readily obtain the necessary food.

Generally, when bees are obtaining nectar we find breeding *increasing in a ratio with the increase of young bees*, not in a ratio with the inflow of food.

If it is not the direct action of the nectar-flow (or feeder-flow) on the queen via the feeding-bees which stimulates the queen, why does the accession of food stimulate brood-production?

It "stirs up the colony," which, explained, is: The bees consume more honey, and necessarily produce more heat, become less densely packed, and the queen, being but a part of the whole, also moves more, finds more food, is more often able to eat to satiety (the normal way of animal life), and perforce lays more eggs. As the young bees become more numerous, hence more quickly found; also increasing heat and open cells of pollen and of honey incite the young bees to full feeding, and the more they eat the more likely the queen is to get all she wants at each request. But even the well-fed queen is not constantly at egg-laying, even in the height of the season. Not infrequently she will retire to some obscure corner and stay perfectly still for ten or more minutes at a time, and during such rest the bees pass and repass as if she was but an ordinary worker. Perhaps she is waiting until they find some more "respect" or "deference."

Most apiarists are familiar with the slowness of brood increase in a colony composed of all old bees, no matter how good the supply of nectar and of the sudden acceleration of egg-production on giving the colony a frame of emerging brood.

Also, all apiarists are, I suppose, familiar with the usual almost total cessation of egg-laying before a swarm issues. Young bees are abundant then, and nectar and pollen fairly pour in. If, under such circumstances, the bees so assiduously *offer* food to the queen, how can she stop the egg-development? It will not do to argue that bees stop offering food to her and yet continue all their other functions.

A brief comparison of the differences in internal conditions between big colonies with superabundant stores (the kind Mr. Dadant said produces the most honey) and less populous colonies, with but moderate stores, may be appropriate here.

In colonies of the first type, when winter breeding begins (the latter part of December), food is plenty and readily accessible, bees are numerous, cluster temperature steady, and the brood-nest is soon surprisingly large for the time of year. Towards spring young bees form quite a respectable percent of the colony, and are steadily increasing. It is these young bees which make this type of colonies to breed so rapidly later on. Practically all of the winter-hatched bees must, as regards nursing ability, be regarded as "young" when early spring arrives, for a bee's age is measured by time elapsed *plus* work done.

With the smaller, or more scantily supplied colonies, everything is conducted on a more meager scale, and later, when stimulation is usually resorted to, they are away behind the first type of colonies, and it takes a ruinous amount of fussing to get them into shape for the harvest.

In other words, by putting into winter quarters big colonies with superabundant food, *we conserve for next year much of this season's stored energy*. By limiting stores, or by having smaller colonies (so as to economize (?) in food, some say), we lose much of such energy—*an absolulely dead loss*.

With the foregoing cursory explanation of the inner life of the colony, I will leave that part of the subject and turn to the economy of stimulative feeding. To be profitable it must enable us to get from the stimulated colonies enough more honey than from the normally big and unstimulated ones, to pay for the food, and the labor and time of the apiarist. Mr. Dadant, in "Revised Langstroth," says of his large, well-supplied colonies, "They *did not have to be fed the following spring, became very strong, and yielded the largest crop*." (My italics). Also, he states that further experiments proved "that there is a profit in leaving to strong colonies a large quantity of honey, *so that they will not limit their spring breeding*." (His italics.)

I cited these quotations in a former article, to which Mr. Dadant replied by quoting from an earlier edition of "Langstroth," that he (Langstroth) favored spring feeding. If this advice of the great master was so valuable, why did Mr. Dadant omit it from his revised edition, and, instead, put special emphasis (by Italicizing) on the exact antithesis of it?

Mr. Dadant cited the feeding of 60 colonies last spring, and attributes much of his crop of 300 pounds per colony (average) to such feeding. Hath the fox lost his cunning? Has Mr. Dadant so soon forgotten the studious care and painstaking comparison which, I understand, his father exercised, and by which the son is supposed to have profited? Had he divided the apiary into two equal parts, had one-half well-supplied over winter, and stimulated the other half in the spring, then had the fed half surpassed the other, the evidence would have been worthy our consideration.

Mr. Dadant quotes his foreman as saying that there is not another apiary in the vicinity with such a crop as his, and leaves us to infer that it is entirely due to stimulation. But that the excess over his neighbor's averages (which he does not give, so we cannot tell the percent of his gain) was due to such stimulation can not be granted without more evidence than has yet been presented. The difference between his average and his neighbor's may have been 10 pounds or 200. The difference may have been due to feeding, to manipulation, to fall condition of colonies, to wintering, to strain of bees, or to locality.

Mr. Dadant has cited the difference fall condition produces, and we all know what manipulation may do, or undo; also the marked difference in various strains, and, as for locality, it is so disturbing an element of calculations as to be used as a general scapegoat.

I know of two apiaries, just one mile apart, both in the same river valley, both possessing apparently the same chance for forage, both managed the same way, and both in former years yielding closely similar averages. This year one of these apiaries has not yielded one pound of surplus, while the other will average, approximately, 40 pounds. I think Mr. Dadant will see he is asking a good deal when he expects us to concede that the evidence of his crop taken alone, and without the support of comparative tests made under the same conditions of locality, time, etc., is proof of the value of stimulative feeding, particularly when he has said repeated experiments in the past prove the fall plan the most profitable, *i. e.*, "such colonies produced the largest crops."

According to his own statement, the country covered by his apiaries (and presumably by his neighbors'), varies greatly in its yields in different parts in different years. We consider this when he talks of his excess over his neighbors being due to stimulation; he seems to have forgotten it. I would refer him to the "A B C of Bee-Culture," edition of 1901, page 239.

I can not find that he has ever given the cost of food and labor for stimulative feeding. He asserts that bees must be fed only at certain times. He also says, "We do not practice feeding every year, because it *requires a great deal of attention* on the part of the apiarist, and I like to look after this myself, and do not always have the time." (My Italics.) From this I deduce that his apiarist, and the rest of us ordinary bee-keepers, lack the skill to succeed (I supposed he was advocating the practice for readers of the Journal), and also that the precentage of increase in the crop is not enough to *pay* him to take the necessary time annually; in other words, something else pays better.

That is my point exactly—other things pay better. I find the labor of preparing bees for successful wintering will simultaneously prepare them to reach the next harvest in prime shape. No extra labor at all, while spring stimulation is all extra labor, and at a season when time is very valuable. In other words, fall *conservation* is productive of better results than spring *stimulation*, and without the latter's cost in time, labor and risk. For it is a risk to limit the supply of food of big colonies, and it very decidedly does not pay to winter any but big ones. or to fuss with any small ones in the spring. In most localities the amount received for the extra honey taken from the colonies in the fall will not pay for the food and labor of giving it, necessary the following spring. Besides all this, stimulation does not always result very favorably; the common people can not always succeed, while the other way is *always safe*, and repeated experiments have proved it profitable.

Providence Co., R. I.

Honey as a Health-Food is the name of a 16-page leaflet (3½x6 inches) which is designed to help increase the demand and sale of honey. The first part is devoted to a consideration of "Honey as Food," written by Dr. C. C. Miller. The last part contains "Honey-Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by every one who has honey for sale. It is almost certain to make good customers for honey. We know, for we are using it ourselves.

PRICES, prepaid—Sample copy free; 10 for 20 cts.; 25 for 40 cts.; 50 for 70 cts.; 100 for $1.25; 250 for $2.25; 500 for $4.00; 1000 for $7.50. Your business card printed free at the bottom of the front page, on all orders for 100 or more copies. Send all orders to the Bee Journal office.

The Premiums offered this week are well worth working for. Look at them.

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

Bee-Keeping Lessons By Mail.

A sister correspondent, who has a text-book on bee-culture, but evidently takes no bee-journal, writes thus:

"I am so anxious to learn I only wish I had some one to ask questions, who understands bees thoroughly. Would it be possible to give a few lessons by mail, for which I would be glad to pay?"

"Our Bee-Keeping Sisters" department, also "Dr. Miller's Answers," in the American Bee Journal, are intended to meet this very want, and the dollar a year paid for the Bee Journal would be much less than you could possibly get such information by private correspondence. Any question asked pertaining to bees will be cheerfully answered in these departments, free of all expense, as far as there is ability to answer.

A Sister Wishes to Begin With Bees.

We have a hive near the house that has not been worked with or cared for, in four years, that I know of, and how much longer I do not know; but the parties said they never realized any good from them, and little wonder. I have made up my mind to give them some attention, which will not be much, and I don't know the first thing about them; still I sit and watch them work, and find it very interesting.

1. The bees are inclined to stay on the front part of the hive. What is the cause, and what shall I do?
2. Would I better put part of them into another hive, as there seems to be so many? or can such a thing be done? If so, how? and when is the best time?
3. Is it best to put in the one-pound boxes with the cells in or out?
4. What is the best kind of a hive to use?

LILLIAN M. MORGAN.

Washington Co., Nebr., Sept. 3.

1. It may be that they need more room. It may be that the hive is too close, and they need ventilation. Give them sufficient surplus room, and raise up the hive for ventilation. It is now so late in the season that you will probably not need to do it this year.
2. Don't think of dividing them now.
3. It is best to use comb foundation in sections, as that is probably what you mean by "cells."
4. A movable-frame hive, the dovetailed hive being one of the most popular.

Report from a Blind Sister.

I wrote early in the spring of 1902, saying that my bees were all dead, and offering the hives for sale. From something I wrote some of my bee-keeping friends inferred that I was in needy circumstances. I had queries and offers of help from several dear people. I wish to thank them, and tell them how much I appreciate the kindly thoughts; but I wish to say that I have a good home and good children to care for their parents and the property. My object in selling the hives was to help some one else, as well as to keep good property from going to waste. I had several inquiries about the hives, but I discouraged their being sent for from distant points, thinking the freight would be greatly against the purchaser.

As the spring days grew warm I began to work with the empty hives. It was something I could do out-of-doors. I had been looking for some out-door work that I could do ever since blindness had come upon me. So day after day, as my feeble strength permitted, I felt my way about for the hives, cleaning them, sorting frames, and sorting those that needed an extra nail. I daily gained in strength. The walnut trees under which I worked began to throw a shade as their new leaves opened. When I had cleaned all except the 15 just taken from the cellar, I began on those. I had noticed a few bees flying about, and supposed they came from a colony half a mile away, belonging to a neighbor. But late in May, when the last hives were reached, I found to my joy that there were living bees in two of them. I now have 8 strong colonies, 4 of them queened by the best red clover queens.

But to go back to my cleaning: As I continued to live out-doors, early in June I noticed that I could often see the outlines of things, and in some favorable light could see a moving object, and tell if it was a white cat or black chicken. Then, when I had cleaned all my hives, and sandpapered a few that were weather-beaten, I painted everything a cream white—hives, supers, and all.

The small amount of sight is only in one eye, but I can go to every hive in the bee-yard, and not much danger of falling over it, if I look carefully, as I can see nothing quickly, not even a bee-hive.

Although it has rained incessantly here, we have our first white clover honey harvest, some of the colonies yielding as much as 80 pounds of the beautiful product. So the dear daughters, who have so kindly loaned me their busy hands, and often tired eyes, to help care for my pets, feel well repaid for them. Mrs. B. J. Livingston.

Martin Co., Minn., Sept. 3.

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

FEEDING BACK NOT GENERALLY PROFITABLE.

Producing two crops to secure one, is what Doolittle calls the feeding-back tactics. And he finds those who don't succeed at it greatly to outnumber those who do. Puts himself with those who can just barely succeed at finishing up sections nearly done. Candying in the comb is a bad trick, and the fed-back honey is much worse at it. Page 493.

SURE METHOD OF FINDING QUEENS.

The Davenport method of finding a queen "whether or no"—shaking all the bees through a zinc-bottomed empty hive—is clearly one of the best methods in sight. Page 501.

MARKETING UNRIPE HONEY.

We were mighty lucky that it was only buckwheat extracted honey that got killed. Had there been no chance to discriminate, I fear the big users that were bitten would have abandoned the use of all honey. And still the seller is going to continue to think that if he can make a sale he is all right. Far from being all right if he has killed off a future sale. This specially affects those who retail in their own fields. We must nurse our customers instead of poisoning them. Very little indeed do many of them know about honey, and we, if we understand where our bread is buttered, will post them honestly and truly. That there is a difference between ripe honey and unripe honey, and how that difference comes about—I suspect that even some of the big buyers need instruction sorely on the point. Page 501.

QUITE A DIFFERENCE.

In my Afterthink, page 505, it's not "improvement" but *imprisonment* that the long-caged queen would be getting.

OUR OWN WAY THE BEST WAY.

'Twas ever thus. The Mississippi beginner knows it's better to put the bees gently in the top—his way—rather than run them in the entrance—Dr. Miller's way. Oft our own way is the best *for us*, just because we put so much more of ourselves into it. Nice that there are in the language such words as "our own," and "mine," and "my way." Page 506.

GETTING SWARMS FROM HIGH TREES.

Yes, Ernest Root, hurrah for that swarming-time belt to fasten saw and pruning-shears and coil of rope to—other tools *ad libitum*! But the smoker—you'll start with the wood of that a-next your precious hide, but when just in the most interesting part of the climb up that tall tree an earnest and fiery—Ouch! will tell to all below how that smoker contrived to whop around. I have some basswood trees to take swarms out of, too. The extreme and dangerous brittleness of basswood limbs decidedly increases the difficulty—'cept when the swarm itself snaps the limb clear off, and it falls to an easier location. Page 510.

VARNISHING FOUNDATION WITH PROPOLIS.

An editorial, on page 515, says bees put a layer of bee-glue all over section foundation when put in too late and left. That's right—but possibly it might be "righter." Should we not learn to discriminate between what bees intentionally do and what they unintentionally do? (Granted that in the economy of Nature one class of doings may serve just as an important a purpose as the other.) Bees intentionally stop all cracks with propolis as fast as they can—round out corners—fill rabbets—and mix the propolis with the wax of bur-combs. Sometimes they put great dabs of it on the sides of the hive, apparently because they consider it precious, and still don't know what else to do with it. (In the tree, rotten wall and propolis makes sound lumber.) But varnishing, whether of foundation or of honey-cappings, I don't think they do intentionally. Nearly all hands, when the honey harvest is off and the propolis harvest is on, have their feet more or less dabbled, and the varnish of surfaces is simply the natural result of continually running over them. All the same, it improves matters from the bee's point of view.

GOOD LOOKS AND CONVENIENCE COST.

I also feel constrained to confess that the symmetry, which is pleasing to the human eye, is, *per se*, more or less of bother and loss to the bee. We arrange for so much good looks, and so much convenience—but have to pay the regulation price for them—quite a bit cheapened to those who let the weeds grow. How disagreeable truth can be, sometimes! My apiary and entrances this summer were *too good* some of the time. Page 515.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Preparation for Wintering Bees.

I am young in the bee-business though not in years. Would it be a safe plan to set one hive on top of another, with say screening between in winter, when wintering in the bee-house? and, of course, packed the same as you would if only one hive were there. Would the moisture from the lower hive be detrimental to those in top hive? Iowa.

Answer.—I don't know; you've struck something I never heard of. I hardly believe the moisture from the lower colony would hurt the upper one. Of course, you would have an entrance above as well as below. If you try the plan, please report what success.

Moving Bees Four Miles.

Can I move 9 colonies of bees four miles south? I expect to move about the last of September, and do not like to let them stand on account of robbing, as there will be no one left at this place when I leave. Some may go back and get lost, or they might not all be home when I move them. Perhaps I can take a cold morning to move them. I am afraid it might amount to a whole colony being left, or going back after being moved. Please advise me what to do about moving them. Subscriber.

Answer.—When bees are moved 4 miles there ought not to be the slightest trouble about any returning so far to the old place. Of course, if any are out in the fields when the hives are moved they would be lost. So, if you are going to move them in the middle of the day, close the hives the night before, or in the morning before bees are flying.

Late Foul Brood Management.

Your postal card came duly to hand, and I note what you say in regard to our neighbors' bees, that you doubted its being foul brood. I am sorry to say that we have established the fact that it is foul brood, from microscopical examination, found all the symptoms in all the stages, from start to finish, as illustrated in "A B C of Bee-Culture," spores and all. The owner is getting some nice comb honey, and he does not want to disturb them (the bees).

Now, this man is not progressive enough to take "heroic" measures toward stamping out the disease, that is, to destroy his hives, bees and all. There are one or two others not far from here, I think, whose bees have foul brood, as they have told me that they did not know what was the matter with the bees, as they have not swarmed for two years. I told him that he would most likely find them diseased.

1. Can those bees be transferred into *new* hives, on new frames of foundation, this fall, after the honey season closes?

2. Do you advise closing up the "suspect" on brood-frames, or can they go and come at will?

3. Will it be necessary to commence feeding at once the imprisoned bees, or can they still gather enough nectar to winter them? PENNSYLVANIA.

ANSWERS.—1. Yes; but unless you have an excellent fall flow they will have to be fed to take them through the winter.

2. I believe it is not considered necessary to confine them.

3. I don't know what your fall yield is; but it is not likely it is enough for a sole dependence for wintering. At any rate, it will be safer to feed as soon as all diseased honey has been used up in comb-building.

Kinds of Bees—Wintering.

1. What kind of bees are "Adels?" Are they something the same as Italians, or a distinct race?

2. Do you think they would be better, or as good, as Italians? Mr. Alley says they are not only the hardiest and most gentle, but the greatest hustlers for honey. They are practically non-swarming and non-stinging.

3. Would hybrid black bees rear any better queens than Italian bees? I have one colony that built very large queen-cells.

4. If the hives are contracted down to five or six frames with a division-board, would it be all right to leave frames of pollen on the outside through the winter? CANADA.

ANSWERS.—1. If I understand it correctly, they are a strain of Italians so named by Henry Alley.

2. I have had no experience with them, so can not say.

3. I don't believe they would.

4. Yes.

Changing Queens in the Fall.

I have 13 colonies of bees. I started in with 5 in the spring, and they have swarmed so that I had 15. One swarm went away, as I was not at home to attend to them. They have not stored much honey in the supers this season, but I think they have a good supply in the brood-chamber. I think of getting a strain of honey-queens for next season, as I am quite sure those I now have are breeding qeeens. I think of trying two or three red clover queens, and the same of Italian honey-queens.

We had a good crop of white clover in this region this season, but the bees did not work on it to any extent, and I think there was very little nectar in the clover.

What would you advise one to do in such a case? Would it be advisable to introduce the class of queens I mention this fall, or wait until next spring? I am anxious to improve my stock, so as to procure more honey. MICHIGAN.

ANSWER.—Don't be too sanguine as to improvement from new blood. Increasing from 5 to 15 is hardly compatible with a very large yield of honey, unless you have a late yield that is heavy. You ought not to have allowed more than one swarm from each colony, and then you would probably have done better in surplus. If there was no nectar in the clover, a difference in bees would not help the case any. It will, however, be a good plan to get one or two queens of different kinds, and watch carefully for results, not so much to see what those queens will do as to see what colonies will do that have young queens reared from these new queens.

Carrying Out Live Bees.

What is the reason that the bees carry out live bees and fly away with them? I am quite sure they are not robbers, as I have only 4 colonies. PENNSYLVANIA.

ANSWER.—Sometimes a diseased bee is carried out alive, so also a young bee that has been made defective by the ravages of the bee-moth.

Colonies Strong in Bees but Short in Stores.

I have 6 colonies of bees, two with Italian queens. The progeny of one of the latter seems no lighter in color than the other 4 colonies, what I supposed were black bees. The other Italian brood is pretty golden-colored, and good workers.

Noticing three of the black colonies were not doing much, I examined all the colonies to-day, and found 3 of the black colonies with very little sealed brood, none with unsealed brood, one in particular had very little brood, and stores or surplus honey much less than at examination, two weeks ago. The other 2 colonies are also lighter in stores, but in a lesser degree. The two with Italian queens and the other black colony have plenty sealed and unsealed brood, but are not increasing in stores, in fact not quite holding their own. All the colonies are strong with bees. I saw only one queen during examination. Have they stopped brood-rearing, owing to being queenless or because there is no honey to gather? The three in question are, two in 8-frame hives, one in a 10-frame hive, and boiling over with bees. What bothers me is, if they cease brood-rearing thus early, would they not be too weak to winter successfully even with feeding, as will have to be done with their present stock of stores, if a later honey-flow does not materialize. ALABAMA.

ANSWER.—I don't know just how much difference between Alabama and Illinois, but in Illinois some colonies cease rearing brood quite early in September. The age of the queen has something to do with it; if a colony supersedes its queen late in the season, the young queen will continue laying later than would the old queen if she had not been superseded. If the honey-flow ceases early, that means an earlier cessation of brood-rearing. You needn't worry much about their being strong enough in bees to winter well. If there it no harvest to stir them up to brood-rearing, that means that the bees will keep pretty quiet, and bees don't grow old fast while keeping still. It isn't with bees as it is with you and me; when work stands still with them, age seems to stand still, too.

Feeding Late Swarms for Winter.

I have four late swarms which are all working nicely; the frames of the hives I put them in had only starters, as that was all I had. If I have to give them a little feed, how much sugar will it take to about a quart of water, or possibly more, to make the syrup to feed the bees? ILLINOIS.

ANSWER.—To make a syrup for feeding as late as this, it requires 5 pounds of granulated sugar to a quart of water.

Loss of Bees—Foul Drood.

1. I have lost nearly all of my bees the past summer. Do you think it is the rainy weather or disease?

2. If it is foul brood will the hives be all right to use next year? CONNECTICUT.

ANSWERS.—1. I don't know. If you mean that a number of colonies died since the first of June, I should be afraid of disease. Rainy weather might hinder the success of bees, but would hardly kill them outright.

2. The hives will be all right, but not the combs, unless, indeed, it turns out that the combs may be made safe to use again by using formaldehyde as a disinfectant.

Best Kind of Bees.

I have 3 colonies of bees, 2 Italian and 1 black. They are in 8-frame Langstroth hives. I am a boy 11 years of age, and I just commenced keeping bees last spring, and like the work very much.

I am a subscriber of the American Bee Journal, and I like it. I wish you would tell me what kind of bees would be the best for me. I want a gentle kind, and that will store lots of honey. There is plenty of white clover in this neighborhood. INDIANA.

ANSWER.—Probably Italian bees will suit you as well as any, and it may be that those you have are all right. You can, however, not be sure of that without being able to compare them with others, and it would be a good plan for you to get an Italian queen from some queen-breeder. After a year or so you can decide which bees suit you best, and then rear your queens from the best. Your father must be a very wise sort of a man to allow a boy of 11 to keep bees. I hope you will be very successful. I like boys.

Caring for Honeyless Bees in the Fall.

1. How shall I care for colonies of bees where they are robbed of their honey after the fall-flow ceases? There are a number who caught bees in boxes and in the sides of houses, and one of my neighbors had a swarm take possession of their washing-machine, where it had been left to drain the water out. These parties expect to kill the bees as soon as they cease to gather honey; I can have them and their brood for taking them out. What I wish to know is: Can I successfully take them and winter them? If so, please give me a little instruction.

2. Is sugar better than honey to feed bees? I have 18 colonies run for comb honey. I put some frames where I took supers off for comb honey to feed the bees if necessary, provided sugar is not as good. NEBRASKA.

ANSWER.—You will have to use your ingenuity to some extent, as each will probably differ from every other case, depending on how the bees are located. The main thing is to get the bees into the hive, upon their combs of brood, if they have any, the combs being transferred as directed in your book for transferring. The probability is that you will not have enough combs, and it will be well to help out with frames filled with foundation. Then you will feed with the Miller or some other feeder, according to the general instructions in your book for fall feeding; trying to let each colony have the equivalent of about 30 pounds of honey. That will require about 22 pounds of dry granulated sugar, if you use sugar syrup.

2. There is no better food for bees than good honey, but granulated sugar makes a very good substitute.

Queenie Jeanette is the title of a pretty song in sheet music size, written by J. C. Wallenmeyer, a musical bee-keeper. The regular price is 40 cents, but to close out the copies we have left, we will mail them at 20 cents each, as long as they last.

NOEL SAYS:

If you are sick with any disease of the Circulation, the Stomach, Liver, Kidneys, Bladder or Throat, VITÆ-ORE WILL CURE YOU!

NOEL is the discoverer of Vitæ Ore, has been familiar with its wonderful properties for two generations, has watched its remarkable action in thousands upon thousands of cases, and HE OUGHT TO KNOW.

NOEL SAYS he doesn't want your money unless Vitæ-Ore benefits you, and NOEL is old enough to know what he wants. NOEL says that the Theo. Noel Company has instructions to send a full-sized One Dollar package on thirty days' trial to every sick or ailing reader of THE AMERICAN BEE JOURNAL who requests it, the receiver to BE THE JUDGE, and not to pay ONE CENT unless satisfied, and NOEL is the President and principal stockholder of the Theo. Noel Company, and what HE says goes. Here is his SIGNATURE ON IT!

Theo Noel

PERSONAL TO SUBSCRIBERS!

WE WILL SEND to every worthy sick and ailing person who writes us, mentioning THE AMERICAN BEE JOURNAL, a full-sized $1.00 package of VITÆ-ORE by mail, POSTPAID, sufficient for one month's continuous treatment, to be paid for within one month's time after receipt, if the receiver can truthfully say that its use has done him or her more good than all the drugs and doses of quacks or good doctors or patent medicines he or she has ever used. Read this over again carefully, and understand that we ask our pay only when it has done you good, and not before. WE TAKE ALL THE RISK; YOU HAVE NOTHING TO LOSE. If it does not benefit you, you pay us nothing. We do not offer to send you a free sample to last three or four days, but we do offer to send you a regular $1.00 package of the most successful curative medicine known to the civilized world, without one cent of risk to you. We offer to give you thirty days to try the medicine, thirty days to see results before you need pay us one cent, and you do not pay the one cent unless you do see the results. YOU ARE TO BE THE JUDGE! We know that when VITÆ ORE has put you on the road to a cure you will be more than willing to pay. We are willing to take the risk.

What Vitæ-Ore Is: Vitæ-Ore is a natural, hard, adamantine rock-like substance—mineral—ORE—mined from the ground like gold and silver in the neighborhood of a once powerful but now extinct mineral spring. It requires twenty years for oxidization by exposure to the air, when it slacks down like lime and is then of medicinal value. It contains free iron, free sulphur and free magnesium, three properties which are most essential for the retention of health in the human system, and one package—one ounce—of the ORE, when mixed with a quart of water, will equal in medicinal strength and curative value 800 gallons of the most powerful mineral water drank fresh from the springs. It is a geological discovery, in which there is nothing added or taken from. It is the marvel of the century for curing

Rheumatism, Bright's Disease, Blood Poisoning, Heart Trouble, Dropsy, Catarrh and Throat Affections, Liver, Kidney and Bladder Ailments, Stomach and Female Disorders, La Grippe, Malarial Fever, Nervous Prostration and General Debility,

as thousands testify, and as no one, answering this, writing for a package, will deny after using. MEDICAL SCIENCE has failed to improve upon or even equal the remedies found in a free state in healing mineral springs. Physicians, the oldest and best, the newest and learned, acknowledge this to be a fact when they encounter a disease which is not amenable to the action of drugs by packing the patient off to Carlsbad, Saratoga, Baden, there to drink the waters which contain the essential properties for the restoration of health, and the patient returns, fresh, healthy, in mind and body. If the sufferers cannot afford the trip—and few but the wealthy can—they must continue to suffer, as the waters deteriorate rapidly, and when transported fail to produce the desired results.

A LETTER TO THE THEO. NOEL COMPANY, CHICAGO, will bring a healing mineral spring to your door, to your own house, your chamber—will bring to you VITÆ-ORE, a mineral spring condensed and concentrated, a natural God-made remedy for the relief and cure of the ills with which man is afflicted. Why continue to suffer when this NATURAL CURING AND HEALING ORE, Nature's remedy, can be had for the asking, when the poor as well as the rich can have the benefit of healing springs?

This offer will challenge the attention and consideration and afterwards the gratitude of every living person who desires better health, or who suffers pains, ills and diseases WHICH HAVE DEFIED THE MEDICAL WORLD AND GROWN WORSE WITH AGE. We care not for your skepticism, but ask only your investigation, and at our expense, regardless of what ills you have, by sending to us for a package. In answer to this, address

THEO. NOEL COMPANY, J. P. Dept., Vitæ-Ore Bldg., Chicago, Ill.

QUEENS!

Golden and Leather-Colored Italian, warranted to give satisfaction—those are the kind reared by QUIRIN-THE-QUEEN-BREEDER. Our business was established in 1888. Our stock originated from the best and highest-priced long-tongued red clover breeders in the U. S. We rear as many, and perhaps more, queens than any other breeder in the North. Price of queens after July 1st: Large Select, 75c each; six for $4; Tested Stock, $1 each; six for $5; Selected Tested, $1.50 each; Breeders, $3 each. Two-frame Nuclei (no queen) $2 each. All Queens are warranted pure.

Special low price on queens in lots of 25 to 100.

All queens are mailed promptly, as we keep 300 to 500 on hand ready to mail.

We guarantee safe delivery to any State, Continental Island, or European Country. Our Circular will interest you; it's free.

Address all orders to

Quirin-the-Queen-Breeder
PARKERTOWN, OHIO.

(The above ad. will appear twice per month only.) 16E13t

Please mention Bee Journal when writing.

If you want the Bee-Book

That covers the whole Apicultural Field more completely than any other published, send $1.20 to

Prof. A. J. Cook, Claremont, Cal.,

—FOR HIS—

"Bee-Keeper's Guide."

Liberal Discounts to the Trade.

Please mention Bee Journal when writing.

FROM MANY FIELDS

A Visit to Two Bee-Keepers.

During the middle of August I had a most delightful trip to Rhode Island and Massachusetts. I met Mr. Arthur C. Miller, and spent a very enjoyable afternoon with him at his apiary. Here I saw bees feeding each other, or one or two bees taking feed from a third which did not extend its tongue in giving it. I also saw evidence of the lack of respect which bees pay their queen. However these two things may be in other localities, in Mr. Miller's locality bees do just as he says they do.

From Mr. Miller's I went out to see Mr. Alley. I found him hard at work, with a red handkerchief over the back of his head and neck, and his smoking-pipe containing tobacco for introducing, between his teeth. He much prefers this handkerchief to a veil, as the latter is hard on his eyes. A few stings, and stinging bees about his eyes, do not seem to bother him in the least.

Mr. Alley had about 175 nuclei scattered about his yard. Of course, they were arranged any way to avoid the loss of queens from entering the wrong hives. He opened many of

Wanted to Sell.

30 COLONIES ITALIAN BEES in Dovetailed Hives, 8-frame, self-spacing Hoffman—frames in good condition—at $3.50 a hive; 5 or more hives at $3.00 a hive. One Cowan No. 15, 2-frame Extractor, and a lot of extracting-combs. Address, S. A. MILLER,
38A2t Box 553, New Decatur, Ala.

450,000 TREES

200 varieties. Also Grapes, Small Fruits etc. Best rooted stock. Genuine, cheap. 2 sample currants mailed for 10c. Desc. price list free. LEWIS ROESCH, Fredonia, N. Y.

Please mention Bee Journal when writing.

Adel Queens.

One Queen, $1.00; more than one at the rate of $9.00 per doz. All Breeding Queens.
38A3t H. ALLEY, WENHAM, MASS.

Please mention Bee Journal when writing

The Emerson Binder

This Emerson stiff-board Binder with cloth back for the American Bee Journal we mail for but 60 cents; or we will send it with the Bee Journal for one year—both for only $1.40. It is a fine thing to preserve the copies of the Journal as fast as they are received. If you have this "Emerson" no further binding is necessary.

GEORGE W. YORK & CO.,
144 & 146 Erie Street, CHICAGO ILL.

his nuclei for me to see the queens in different stages of growth. I saw queens laying, virgin queens in nuclei, and dozens together in nurseries; queens just fertilized, with the male organs still attached, and queens having filled the nucleus hive and ready to ship.

I saw Mr. Alley work his entire system from beginning to end, and for him it truly is simple, fast, and, from the appearance of his queens, productive of good results. In less than 10 minutes he removed eggs from the hive, cut the comb into strips, killed each alternate egg, fastened the strips to sticks, put the sticks in the frame, and gave all to a colony of bees prepared several hours before. He thus prepared eggs for about 60 cells.

Mr. Alley's method of introducing virgin queens to nuclei from nursery-cages is very easy and quick. He simply removes the plug from the cage, takes the feeder from the hive, plugs the entrance with a plantain leaf, smokes thoroughly with tobacco-smoke through the feeder-hole in the top, shakes the queen out of the cage into the feeder-hole, replaces the feeder, and the work is done. In a few days, if the weather is good, he has a laying queen. This introducing is done toward evening, and by morning the entrance has been forced open, and all is well. He allows the queen to lay in the nucleus for nearly a week before shipping. This keeps his nuclei strong.

I do not know how a system could be more simple, rapid, and reliable, than this one of Mr. Alley's. RICHARD D. BARCLAY, 2d.

Philadelphia Co., Pa., Sept. 10.

Wettest Season in Many Years.

It has been the wettest and coldest summer here for many years, being very wet all through June, July, August, and all but three days in September, so far.

I started with 3 colonies, increased to 6, and have taken about 150 pounds of honey, so far. But prospects are good for a good fall crop.

I get from 15 to 20 cents a pound for my honey (comb) per section, and I sell culls for a shilling apiece, but eat the most of them ourselves. D. M. LAUDENSLAYER.

Clinton Co., Pa., Sept. 12.

Introducing Queens.

As I am so deeply interested in apiculture, and have so much to learn, and so many questions to ask, I am willing to give other beginners any little kink I have found out. So here is one:

I had two queenless colonies, as I supposed;

Italian Queens,
Bees and Nuclei.

We have a strain of bees bred specially for honey-gathering and longevity, at the following prices:

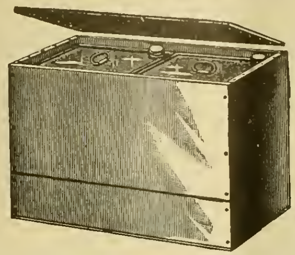
One Untested Queen.....$ .60
One Tested Queen .... .80
One Select Tested Queen. 1.00
One Breeder Queen 1.50
One-Comb Nucleus (no Queen).................. 1.00

These prices are for the remainder of the season.

Queens sent by return mail. Safe arrival guaranteed. For price on Doz. lots send for Catalog. J. L. STRONG,
16Atf 204 E. Logan St., CLARINDA, IOWA

Please mention Bee Journal when writing.

BEST
Extracted Honey For Sale
ALL IN 60-POUND TIN CANS.



Alfalfa Honey

This is the famous White Extracted Honey gathered in the great Alfalfa regions of the Central West. It is a splendid honey, and nearly everybody who cares to eat honey at all can't get enough of the Alfalfa extracted.

Basswood Honey

This is the well-known light-colored honey gathered from the rich, nectar-laden basswood blossoms. It has a stronger flavor than Alfalfa, and is preferred by those who like a distinct flavor in their honey.

Write for Quantity Prices by Freight, if Interested.

A sample of either, by mail, 10 cents, to pay for package and postage.

Order the Above Honey and then Sell It.

We would suggest that those bee-keepers who did not produce enough honey for their home demand this year, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere.

GEORGE W. YORK & CO., 144 & 146 E. Erie St., Chicago, Ill.

REMARKABLE The Universal Satisfaction our QUEENS do give...

STERLING, GA., June 29, 1903.
I was showing my father yesterday how my bees, which I bought from you, were out-working everything in my apiary. Send me 4 Buckeye Red Clover and 2 Muth Strain Golden Italians. I will order more after next extracting. THOS. H. KINCADE.

Buckeye Strain Red Clover Queens. They roll in honey, while the ordinary starve.
Muth Strain Golden Italians—NONE SUPERIOR. .·. Carniolans—NONE BETTER.

Untested, 75c each; 6 for....................$ 4.00 | Tested, $1.50 each; 6 for....................$ 7.25
Select Untested, $1.00 each; 6 for.......... 5.00 | Select Tested, $2.50 each; 6 for............ 12.00
Best money can buy, $3.50 each.

Send for Catalog of BEE-SUPPLIES; complete line at manufacturer's prices.

The Fred W. Muth Co.,
Front and Walnut, - CINCINNATI, OHIO.

Dittmer's Foundation! Retail and Wholesale.

This foundation is made by a process that produces the superior of any. It is the cleanest and purest. It has the brightest color and sweetest odor. It is the most transparent, because it has the thinnest base. It is tough and clear as crystal, and gives more sheets to the pound than any other make.

Working wax into Foundation for Cash a Specialty. Beeswax always wanted at highest price.

Catalog giving FULL LINE OF SUPPLIES with prices and samples, FREE on application.
E. GRAINGER & Co., Toronto, Ont., Sole Agents for Canada. GUS. DITTMER, Augusta, Wis.

Let me SELL or BUY your
HONEY

If you have some to offer, mail sample with lowest price expected, delivered Cincinnati

IF IN NEED

State quantity and kind wanted, and I will quote you price. I do business on the cash basis, in buying or selling.

Full stock of Bee-Supplies, the best made. Root's Goods at their factory prices. SEEDS of Honey-plants.

C. H. W. WEBER Successor to CHAS. F. MUTH and A. MUTH.
2146-48 Central Ave., CINCINNATI, OHIO.

Thousands of Hives - Millions of Sections

Ready for Prompt Shipment.

We are not selling goods on NAME ONLY, but on their quality. In addition to the many car-loads we are shipping to all parts of the United States, we have just made one shipment of five car-loads to England.

G. B. LEWIS CO., Watertown, Wisconsin, U. S. A.

Bees and Apiary Stock at a Bargain!

We have for sale in Lee Co., Ill., (100 miles west of Chicago, on the Chicago & Northwestern and Illinois Central Railroads), the following list, some of which is new, and the balance as good as new:

66	10-frame Dovetailed Nailed Hive-Bodies	25c each.
60	10-frame Simplicity Nailed Hive-Bodies	20c each.
167	8-frame Hive-Bodies	20c each.
70	Wood-bound 10-frame Zinc Honey-Boards	15c each.
20	Unbound 10-frame Zinc Honey-Boards	10c each.
1200	New, Clean, Wired Extracting Combs (L. size)	15c each.
700	New L. Brood-Frames with full sheets wired foundation	10c each.
500	Good L. Brood-Combs	12c each.
1	2 Frame Cowan Reversible Honey-Extractor	$8.00
1	Two-part Wooden Uncapping-Box	4 00
1	"New Model" Solar Wax-Extractor (glass 26x60 in.)	8.00
1	Wooden Honey-Tank with galvanized-iron bottom (holds 1800 lbs.)	10.00
1	Bingham Honey-Knife	.50
1	6-inch Comb Foundation Mill	15 00
1	10-inch Comb Foundation Mill	25.00
530	New Wired Staple-Spaced Brood-Frames—per 100	2 00

Also 60 Full colonies Italian Bees in 10-fr. Langstroth hives, at these prices: 5 colonies at $4.50 each; 10 or more at $4.00 each. No disease.

All the above can be shipped promptly. First come, first served. What do YOU want out of the lot? or do you want it all? Of course the combs and frames of foundation could be filled into the empty hive-bodies and shipped safely in that way, if so desired. (No order filled for less than $5 00 from the above list). Address,

GEORGE W. YORK & CO.,
144 & 146 East Erie Street, CHICAGO, ILL.

BEE-SUPPLIES!
ROOT'S GOODS
AT ROOT'S PRICES
WALTER S. POUDER.
512 MASS. AVE.
INDIANAPOLIS, IND.

Everything used by bee-keepers. POUDER'S HONEY-JARS. Prompt service. Low Freight Rates. NEW CATALOG FREE.

BINGHAM'S PATENT Smokers
25 years the best. Send for Circular.
25Atf T. F. BINGHAM, Farwell, Mich

Hybrid Queens! 25 CENTS EACH—5 FOR $1.00. Full Colony with Queen (no combs) $1.00; 2 or more, 75 cents each.
H. H. Porter, Baraboo, Wis.

Sections, Shipping-Cases, Honey-Cans,

And everything necessary for the bee-keeper Prompt shipping. FINE ITALIAN QUEENS Catalog free.

C. M. SCOTT & CO.
1004 E. Washington St.,
49Atf INDIANAPOLIS, IND.

DAIRYMEN ARE DELIGHTED to meet those who work for us. Cow keepers always have money We start you in business. You make large profits. Easy work. We furnish capital. Send 10 cents for full line of samples and particulars.
DRAPER PUBLISHING CO., Chicago, Ills.

TEST PAGE FENCE ONCE
and you'll never be satisfied with any other.
PAGE WOVEN WIRE FENCE CO., Adrian, Mich.
Please mention Bee Journal when writing

28 cents Cash paid for Beeswax.

This is a good time to send in your Beeswax. We are paying 28 cents a pound—CASH—for best yellow, upon its receipt, or 30 cents in trade. Impure wax not taken at any price. Address as follows, very plainly,

GEORGE W. YORK & CO., 144 & 146 Erie St., Chicago, Ill.

Please Mention the Bee Journal when writing Advertisers *****

I found no queen in either, nor any brood of any age, so I sent for two queens, which came all right, and near night the same day I examined both hives again, and found no queen in either, but queen-cells of several ages, so I cut them all out. Another thing, I found what looked like drone-cells at least 3/8 or 1/2 inch in diameter, the largest I ever saw. I let those queens remain in their cages inside of the hives for two days and one night, in order to get the scent of the hives.

Toward sunset of the second day I took an empty hive and placed it immediately in front of the old hive, say a foot or so, with a wide board forming a bridge from one hive to the other. I then took out each frame with the bees on and put them in this empty hive-body, which, when completed, I sprinkled with peppermint water, then sprinkled the queen to be introduced, and then brushed the bees all above from the frames, and placed the empty frames back in the old hive, dumped the bees out on this bridge, and let them run in as a swarm, and when about half in I turned the queen and escort bees loose, and saw them run in all right. I then placed a super of frames on top, that I had recently transferred from a box-hive, all tied with strings, and let them have this to occupy their attention for awhile, until they became well acquainted with the queen, and then I closed the hive.

The next morning, on visiting these hives, I found one queen dead and dragged out, and the other showed nothing wrong that I could see from the outside, but I would disturb only the one with the dead queen. I got my assistant and went carefully to work to examine to see if there was not some sort of a queen in this hive; although I had examined this particular hive a half-dozen or more times, I was going to make a more thorough thing of it. But on the third frame I lifted up, my assistant saw a queen, and on examining her she showed signs of something being wrong—seemed to be crippled in one leg, and got about very slowly and clumsily; still, there was not an egg of any kind or any brood to be seen, and I suppose this hive has been in this broodless condition no telling how long, as the colony had become reduced from a very large one to quite a small one, but had plenty of honey and no drones.

After writing the above I examined the other hives, and to my great satisfaction found my new process of introducing a queen to a colony that had been queenless ever since it was hived May 20, had proven a perfect success.

When I placed this queen in her cage inside the hive the bees clustered around her and clung to the wire, and held on with such a grip I could hardly force them loose. I thought that was an unfavorable sign—one that indicated they would ball her if they could get to her—and it was with the greatest fear, and with but little hope I had of successfully introducing a queen when the bees acted in this way; but, being a novice, I did not know whether it was a favorable or an unfavorable sign.

My idea of this method of introducing a queen into a colony, was that by brushing them all off and running them in as a swarm, and spraying them, would so mix up things and so confuse them that they could not tell one bee from another; and through this freshly transferred super, with the combs tied with strings and leaking with honey, was to divert their attention from the queen to the work of fastening in these combs and lapping up the running honey. JOHN KENNEDY.

Adams Co., Miss.

CONVENTION NOTICES.

Illinois.—The annual meeting of the Northern Illinois Bee-Keepers' Association will be held in the Court House, in Rockford, Ill., Tuesday and Wednesday, Oct. 20 and 21, 1903. A good program is being prepared, and all interested in bees are invited to attend.

Cherry Valley, Ill. B. KENNEDY, Sec.

Utah.—The Utah Bee-Keepers' Association will meet in the City and County Building in Salt Lake City, Oct. 5, commencing at 4:30 o'clock p.m. Among the subjects discussed will be the winter problem and the best method to promote the interest of the State and National Associations. E. S. LOVESY, Pres.

Long Tongues Valuable

South as well as North.

How Moore's strain of Italians roll in the honey down in Texas.

HUTTO, TEX., Nov. 19, 1902.

J. P. MOORE.—Dear Sir:—I wish to write you in regard to queens purchased of you. I could have written sooner, but I wanted to test them thoroughly and see if they had those remarkable qualities of a three-banded Italian bee. I must confess to you I am more surprised every day as I watch them. They simply "roll the honey in." It seems that they get honey where others are idle or trying to rob; and for gentleness of handling, I have never seen the like. Friend E. R. Root was right when he said your bees have the longest tongues; for they get honey where others fail. I will express my thanks for such queens. I am more than pleased. I will stock my out-apiaries next spring with your queens.

Yours truly, HENRY SCHMIDT.

The above is pretty strong evidence that red clover is not the only plant which requires long-tongue bees to secure the greatest quantity of nectar.

Daughters of my 23-100 breeder, the prize-winner, and other choice breeders: Untested, 75 cents each; six, $4.00; dozen, $7.50. Select untested, $1.00 each; six, $5.00; dozen, $9.00. Safe arrival and satisfaction guaranteed. Circular free. I am filling all orders by return mail, and shall probably be able to do so till the close of the season.

J. P. Moore, L. Box 1, Morgan, Ky.

31Atf Pendleton Co.

Please mention Bee Journal when writing

$300,000,000.00 A YEAR and you may have part of it if you work for us. Uncle Sam's poultry product pays that sum. Send 10c for samples and particulars. We furnish capital to start you in business. Draper Publishing Co., Chicago, Ill.

Please mention Bee Journal when writing

SWEET CLOVER

And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5℔	10℔	25℔	50℔
Sweet Clover (white)....	$ .65	$1.20	$2.75	$5.00
Sweet Clover (yellow)....	.90	1.70	4.00	7.50
Alsike Clover	1.00	1.80	4.25	8.00
White Clover	1.50	2.80	6.50	12.50
Alfalfa Clover	1.00	1.80	4.25	8.00

Prices subject to market changes.

Single pound 5 cents more than the 5-pound rate, and 10 cents extra for postage and sack.

Add 25 cents to your order, for cartage, if wanted by freight, or 10 cents per pound if wanted by mail.

GEORGE W. YORK & CO.
144 & 146 Erie Street, CHICAGO, ILL.

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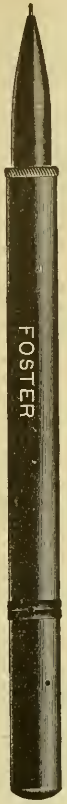

(Exact size of the Pen.)

FREE as a.... Premium

A Foster Stylographic PEN....

This pen consists of a **hard rubber** holder, tapering to a **round point**, and writes as smoothly as a lead-pencil. The **point** and **needle** of the pen are made of **platina**, alloyed with **iridium**—substances of great durability which are not affected by the action of any kind of ink.

They hold sufficient ink to write 10,000 words, and **do not leak or blot.**

As they make a line of **uniform width** at all times they are **unequaled for ruling purposes.**

Pens are furnished in neat paper boxes. Each pen is accompanied with full directions, filler and cleaner.

BEST MANIFOLDING PEN ON THE MARKET.

19,000 Postmasters use this kind of a pen. The Editor of the American Bee Journal uses the "Foster." You should have one also.

How to Get a "Foster" FREE.

Send TWO NEW SUBSCRIBERS to the American Bee Journal for one year, with $2.00; or send $1.90 for the Pen and your own subscription to the American Bee Journal for one year; or, for $1.00 we will mail the pen alone. Address,

GEORGE W. YORK & CO.
144 & 146 Erie St., Chicago, Ill

25,000 lbs. of the very best Extracted Honey for sale in new cans at 6½ cents per lb. for the lot. Also 3,000 lbs. of A No. 1 white comb honey in 4x5 sections at 13 cts. per lb.

F. J. GUNZEL, Weiner, Poinsett Co., Ark.

39Atf Please mention the Bee Journal.

WE INVITE all readers of the AMERICAN BEE JOURNAL who seek a college for themselves or friends to investigate

Mount Union College

Our motto in all departments is "Maximum efficiency at minimum cost."

Our scholastic training is equal to the best, our reputation first-class. All expenses for a year, aside from the clothing and traveling, less than $200.00. Co education, health conditions, moral and religious influence, superior.

Send for catalog.

MOUNT UNION COLLEGE,
Alliance, Ohio.

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BOYS WE WANT WORKERS Boys, Girls, old and young alike, make money working for us. We furnish capital to start you in business. Send us 10c stamps or silver for full instructions and a line of samples to work with. DRAPER PUBLISHING CO., Chicago, Ill.

Please mention Bee Journal when writing.

HONEY AND BEESWAX
MARKET QUOTATIONS

CHICAGO, Sept. 18.—Sales are not frequent enough to keep receipts cleaned up. They are made on a basis of 13@14c for comb of the best grades. Extracted, white, 6½@7c for clover and basswood, and 6@7c for other white honeys; amber, 5½@6½c; according to flavor and package. Beeswax, 30c. R. A. BURNETT & Co.

KANSAS CITY, Aug. 25.—Receipts of comb honey more liberal; demand improving. We quote fancy white comb, 24 section case, $3.25; No. 1, white amber comb, 24-section case, $3.00; No. 2, white amber comb, 24-section case, $2.75; Extracted, white, per lb., 6½c; amber, 5½@6c. Beeswax, 25@30c. C. C. CLEMONS & Co.

ALBANY, N.Y., Sept. 4.—Demand for honey improving, at 15@16c for fancy white comb; 14@15c for No. 1; 13@14c for No. 2. Production of honey in this vicinity is very light. This market will have to depend on other sections more this season than ever. Extracted honey, 7@7½c for white; 6@6½c for mixed and buckwheat. Beeswax, 28@30c. H. R. WRIGHT.

CINCINNATI, Aug. 6.—The supply about equals the demand for extracted honey. We are selling amber extracted in barrels from 5½@6½c, according to quality. White clover, barrels and cans, 7@8½c, respectively. Comb honey, fancy, in no drip shipping cases, 16@16½ cents. Beeswax, 30c. THE FRED W. MUTH Co.

NEW YORK, Sept. 8.—New crop comb honey is beginning to arrive more freely, and the demand is good for all grades. We quote fancy white at from 14@15c, No. 1 at 13c, amber at from 11@12c; no buckwheat on the market as yet.

Extracted is plentiful, and in fair demand at 7c for the white, 6@6½c for the light amber, 5@5½c for dark. Southern in barrels at from 55@65c per gallon, according to quality. Beeswax is declining, and nominal at from 28@29c.

HILDRETH & SEGELKEN.

CINCINNATI, Sept. 18.—The extracted honey market has weakened a little as white clover is offered quite plentiful; prices of sales I made ruled as follows: Amber, in barrels, 5@5½c; water-white alfalfa, 6@6½c; fancy white clover, 6½@7½c. Comb honey, fancy water-white, 14@15½c. No sales for lower grades. Beeswax, 28c. C. H. W. WEBER.

SAN FRANCISCO, Sept. 2.—White comb honey, 13@14c; amber, 9@11c. Extracted, white, 5½@6c; light amber, 5@5½c: amber, 4¼@5c; dark amber, 4@4¼c. Beeswax, good to choice, light, 27½@29c: dark, 25@26c.

Most of the comb on market is of small lots, and while being very steadily held, fails to move as readily or to as good advantage as would straight carload lots of uniform and high grade. Extracted is in high request, with offerings of only moderate volume, and market firm at prevailing values.

WANTED! FANCY COMB HONEY In no-drip shipping-cases. Also Amber Extracted in barrels or cans. Quote your best price delivered Cincinnati. The Fred W. Muth Co.

32Atf Front and Walnut, CINCINNATI, OHIO.

WANTED—Comb Honey in quantity lots. We are perhaps the only dealers in this article owning as much as 150,000 pounds at one time. Please state quantity, quality and price asked for your offerings. Thos. C. Stanley & Son.

24Atf MANZANOLA, COLO., or FAIRFIELD, ILL.

WANTED—Extracted Honey.

Mail sample and state lowest price delivered Cincinnati. Will buy FANCY WHITE COMB HONEY, any quantity, but must be put up in no-drip shipping-cases.

C. H. W. WEBER,
2146-48 Central Ave., CINCINNATI, OHIO.
24Atf Please mention the Bee Journal.

WANTED!

TO BUY—White Clover Comb and Extracted HONEY—also Beeswax. Spot cash. Address at once, C. M. SCOTT & CO.

33Atf 1004 E. WASH. ST., INDIANAPOLIS, IND.

Please mention Bee Journal when writing advertisers.

The Best Bee-Goods in the World....

are no better than those we make, and the chances are that they are not so good. If you buy of us **you will not be disappointed. We are undersold by no one.** Send for new catalog and price-list and free copy of THE AMERICAN BEE-KEEPER; in its thirteenth year; 50 cents a year; especially for beginners.

—THE—

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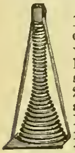

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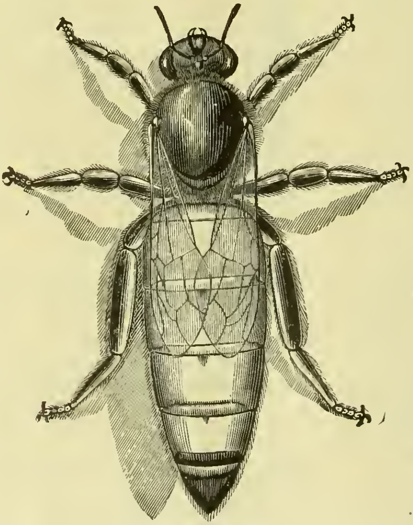

SPRING BLUFF, WIS., July 18, 1903.
THE A. I. ROOT CO., Medina, Ohio.

Dear Sirs:—I thought I would write you a few lines in regard to the Red Clover Queen I got from you. They haven't swarmed yet this summer, but I have taken 48 sections from them and there is 24 more all ready to come off.

Just think, 72 nice sections of as nice honey as ever was made, and only July 18th. It seems as though they will surely fill 48 more.

I don't know whether their tongues are any longer than any of the others, or whether they gathered it from Red Clover, but surely such bees are worth money.

I use the 8-frame Jumbo frame.

C. E. KELLOGG.

C. E. KELLOGG, Spring Bluff, Wis.

Dear Sir:—We have yours of July 18th and would be glad to have you advise us by return mail with reference to the capping of the honey. Some parties say the capping from these bees is not white, and we would be glad to have you advise us how your honey is in this respect, and oblige, Yours truly,

THE A. I. ROOT CO.

SPRING BLUFF, WIS., July 31, 1903.
THE A. I. ROOT CO., Medina, Ohio.

Dear Sirs:—Yours of July 24th at hand to-day. In regard to your question in reference to the cappings of the honey from these bees I will say that it is simply perfect, beautiful snow-white and every box perfect. 96 one-pound sections now. I am quite sure they will fill two more supers, which will bring the number up to 144. I would like very much to have you see a few of those sections, and I will be glad to send you a few.

Now, I haven't told you ALL their good qualities yet. I am sure they are by far the most gentle bees to handle I have. I could take off the sections without smoke or veil without getting stung.

There are a few traits about them that seem to me are quite remarkable aside from their honey-gathering; they don't seem to want to swarm.

I will write you again in a few weeks and let you know if they fill the 144 sections, which I am sure they will. Respectfully, C. E. KELLOGG.

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AMERICAN
BEE JOURNAL

43d Year. CHICAGO, ILL., OCT. 1, 1903. No. 40.

WEEKLY

UDO TOEPPERWEIN, of Bexar Co., Tex.,
Director of the National Bee-Keepers' Association.
(See page 628.)

THE AMERICAN BEE JOURNAL

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DEPT. EDITORS,
DR. C. C. MILLER, E. E. HASTY, EMMA M. WILSON

IMPORTANT NOTICES.

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AMERICAN
ESTABLISHT IN 1861
THE OLDEST BEE-PAPER IN AMERICA
BEE JOURNAL

43d YEAR. CHICAGO, ILL., OCT. 1, 1903. No. 40.

Editorial Comments

Too Abundant Rains is the cry of the agricultural papers in some parts. The bee-keeper, along with the farmer, will suffer from this, and producers of comb honey in one way that novices may not suspect. With continuous rains the atmosphere becomes saturated with moisture, and honey, having a strong affinity for moisture, behaves in this moisture-laden air much as it would in a damp cellar. The honey becomes thin in the cell, and increases so much in bulk that the air-space next the capping is filled with the liquid, giving the comb a water-soaked appearance. While nothing may be done to effect a cure, something may be done in the way of prevention, and even in warm weather it may pay to use fire to heat up the honey-room to the drying point.

Standard Weight of Extracted Honey.—At present there is no such standard. Is it desirable? Is it feasible? Good honey contains somewhere in the neighborhood of one-sixth of its weight of water; in a moisture-laden atmosphere it may attract to itself so much moisture as to be nearly half water. Taking these two extremes, there ought to be a material difference in price; is there? A grocer who has bought some of the thin honey at a certain price, when approached by one who has a fine article of extracted honey, will, in many cases, expect to buy it at the same price. In too many cases honey is honey, without regard to color, flavor, or body.

Suppose we take a case not extreme: A grocer buys honey that is a third water at 8 cents a pound, and afterwards buys some only a sixth water; if 8 cents is a fair price for the former, what is an equitable price for the latter? If we throw out the water as of no value, the 8 cents was paid for two-thirds of a pound of solid honey, if we may use that expression. That would make a pound of solid honey worth 12 cents. In the honey with one-sixth water there is five-sixths of a pound of solid honey; at 12 cents a pound it is worth 10 cents. So, if the one honey is worth 8 cents a pound, the other is worth 10 cents. That is on the supposition that one honey is just as good as the other except as to the matter of density. As a matter of fact it is not.

It is very clear that there is no fairness in having these two honeys sell at the same price; so it would seem desirable that there should be some standard by which the price could be established. Is it feasible to adopt and to use such a standard? That is another question.

As to the Queen and Her Treatment.—On page 532, some questions were asked of Arthur C. Miller with regard to some of the relations of queen and workers. Answers were promptly received, and, with apologies to Mr. Miller for delay, they are here given:

> 1. CARESSING.—I interpret it as curiosity, and searching for food. I also surmise the odor of a pregnant female, or, in the case of a queen-bee, whose structure is peculiar, we may have an odor comparable to that of animals "in heat," may be accountable for some of the attention the queen receives. Certainly. virgin queens, "exhausted" queens, and queens not laying, attract far less attention than does a queen in the full tide of laying.
>
> "Grooming" is the only thing approaching "respect," and I should be pleased for an explanation of its purpose.
>
> 2. TONGUE POKED FROM CELLS.—I don't know what for. It may be for food, but I've never seen a queen get any then. And—
>
> 3. HOW DOES A QUEEN ASK FOR FOOD?—With her antennæ. That is to say, they are always active when she is seeking food, and often a deal of "talk" takes place between the queen and the bee from which she is soon to obtain food.
>
> If you will watch a queen-cell you will seldom see the antennæ put through the cut except for an instant now and then. Cut them from a bee of any kind and note the result. Immediately the poor creature seems to become deaf, dumb and blind. Lubbock made extensive experiments in that line.
>
> The management of queens in nurseries, in introducing, theories of stimulating, etc., are all based on the assumption that bees offer nod, "holding out their tongues to the queen, offering her food." I believe the individual bees to be utterly selfish. I think we must (for many purposes) regard the colony merely as an aggregation of individuals, each possessing many of the characteristics of "solitary" bees, which, I believe, is considered the original type from which the honey-bee sprung.
>
> ARTHUR C. MILLER.

If observation shows that bees never offer food with the tongue, and that food is never thus given, the food being given by the mouth and received by the tongue, it is well to be exact in our knowledge on that point, even at the expense of giving up cherished traditions. Whether all will be ready to accept the view that workers are without special affection for their reigning sovereign—the term "reigning sovereign" being used in a highly figurative sense as a sort of traditional habit—remains to be seen. So long as Mr. Miller is himself uncertain as to the purpose of "grooming," while admitting its approach to "respect," he may expect that some will believe it *is* respect; and the "admiring circle" so frequently seen formed about a queen, and the wail of the bees at her loss, will be offered as proofs not only of respect but affection.

In pulling up weeds in a flower-bed one is in danger of pulling up flowers at the same time. If, while the weeds are being pulled up, we find the roots of some of our flowers disturbed, let us thank the weeder for pulling up the weeds.

May Supplant Sugar-Beet.—Under this heading appears the following dispatch from Washington to the Chicago Daily News:

> The Agricultural Department is inquiring into the statement of Consul General Richard Guenther, that a new plant has been discovered in South America, which promises to supplant the sugar-cane and the sugar-beet. Scientifically the plant is known as the *Eupatorium rebandium*, and it contains a large amount of saccharine matter properties, which are easy to extract.
>
> According to Mr. Guenther, a lump the size of a liver-pill will do the business in a cup of coffee, as the product made from the plant is from 20 to 30 times sweeter than cane or beet sugar. It is said to be easily cultivated in countries having climatic conditions similar to those of the southern portion of the United States.

Bee-keepers are not specially anxious as to how sugar-beet men may view this matter, but any new development in "sweets" can hardly fail to suggest the question, "What effect will it have on the honey market?"

The probability is that nothing will come of it, for at present it is only in the rumor stage, but suppose that what Mr. Guenther is reported to have said should turn out to be true, there is a possibility that the price of sugar may be materially reduced, in which case what about the price of honey?

It is not at all certain that cutting the price of sugar in two would have any material effect on the price of honey—certainly the price of honey would not be cut in two as a consequence. With the price of sugar and honey close together there is direct competition, for, to a large extent, one can take the place of the other as a mere sweetener.

When, however, a man pays for a section of honey an amount that would purchase three pounds of sugar, the two can hardly be said to be in competition, and the extra price paid for the honey is paid for the extra qualities it possesses, and with which sugar can in no way compete. A drop in the price of sugar to 3 cents a pound would not induce him to take the sugar in place of the honey any more than when sugar was 6 cents. So we need not worry whether or not *Eupatorium rebaudium* materializes as a formidable competitor of the sugar-beet.

Sketches of Beedomites

UDO TOEPPERWEIN.

Mr. Udo Toepperwein, whose portrait graces our first page this week, is a resident of Texas. He began the bee-business when a little boy, and decided, years before he was of age, that he would make bee-keeping a life study. He gradually worked his way up, and is now manager of the Texas branch of one of the largest bee-supply manufacturers in the world, and also has the exclusive sale in that State of honey-cans made by a large firm.

Mr. Toepperwein also has an extensive business in buying whole crops of honey from bee-keepers in and around the locality where he lives, and has himself apiaries at different places near, besides an apiary of 40 colonies right in the city.

Mr. T. was married only about a year ago, is a bright young business man, only 25 years of age, and seems to be able to take care of almost any amount of business with good judgment. Last spring he was appointed a member of the Board of Directors of the National Bee-Keepers' Association, to take the place of Mr. A. I. Root, who had recently resigned.

We have met Mr. Toepperwein on several occasions, and believe he is representative of the best in beedom in the State of Texas. He is quite a "convention trotter," though he seldom takes any part in discussions unless called out, when he speaks with a freedom and intelligence that evidently are born of experience. We believe he will prove an honor to Texas and a credit to himself as a member of the Board of Directors of the National Association.

Miscellaneous Items

ON TO LOS ANGELES!—Having arrived at Williams again, about noon on Monday, Aug. 17, after visiting the Grand Canyon, our car was attached to the through train on the main line of the Santa Fe, bound for Los Angeles. It was a delightful ride for many miles, surrounded with mountains whose sides were covered with pines, and along the railroad acres of the beautiful cleome, or Rocky Mountain bee-plant, nodding in the breezes.

But towards evening we began to get into the New Mexico desert, and how hot it was! Nothing but heated sand all around us, and hot sunshine above us, with a suffocating breeze that one could imagine came from the lower regions.

We arrived at Needles about 9 p.m. This is called the hottest place along the line. We could easily believe it. The temperature must have been about 110 degrees above zero. It seemed to us the hottest night we ever passed through—and yet not as terrible as we expected from the way we had been previously warned.

At Needles, Indian squaws and maidens were offering long strings of beads of various colors, which were very pretty indeed. And they made many sales to the ladies of our train. The prettiest were $1.00 per string, though in other places $1.75 or $2.00 are the prices asked for the same thing. They are worn by ladies as girdles, or around the neck, and are indeed quite attractive.

We omitted to say that at Williams, the Santa Fe railroad company put on our train a man known as a "Tourist Conductor." At least that was what it said on his cap. His name was Max Jenney. (Probably he has that same name yet, as he was a married man at the time!) Now, we have met men that we thought could talk—men that some would say had a double dose of "the gift of the gab." But here was a man that simply was "all talk." Why, he knew everything about everything that anybody possibly wanted to ask about California or anything else. He knew the flowers, the fruits, the mountains, the climate—well, we wouldn't have space to mention them all. He was good-natured, too. If the Santa Fe ever pays any of its employees for genuine talking ability, Max Jenney ought to get a big salary. He earns it. In fact, the State of California ought to pay him, too. If everybody he meets doesn't stay in California after once inside the State, it won't be Max Jenney's fault. We just got away from him as fast as possible. Why, he'd make you forget the old home and any business there (if you left any), and have you believe California is really the vestibule to Heaven.

Max Jenney!—the car of bee-keepers won't forget him soon. He's a good one. He's an actor, an enterprising story-teller—true (?) stories, of course—a "hale fellow, well met"—a "Tourist Conductor!" Ah, "Max," you're a dandy. Long may you live to "conduct" the "tourists" into your land of bloom, of sunshine, of climate—of heat and *dust*—gold, and the more common, earthy kind of dust.

The morning of Tuesday, Aug. 18, we began to get into the San Bernardino Mountains. We were at last in California! Could it be possible? Personally, we had longed, for years, to set eyes on that far-away land of gold. Finally, we were "right in it." There were the orange and lemon groves, the eucalyptus and pepper trees. Yes, and the yucca and cacti. But no grass! Oh, how dry and barren the ground looked! And everything covered with dust.

We reached Pasadena, which is some 10 miles this side of Los Angeles, about 9 a.m. Having relatives there, we stopped off until towards evening. We were at once driven in a carriage to one of the many lovely homes to be found there, and the very first thing we did was to take a good bath. Oh, wasn't it fine, after that long, dusty ride of nearly a week? How blessed it was to be clean once more! If we could only then have taken a long nap, we would have felt more natural again. But there was no time for that. We must soon take the street-car for Los Angeles, in order to be on hand for the reception to be tendered by the California bee-keepers in the evening.

Oh, yes, we forgot to say that as we stepped off the train at Pasadena who should we see but Geo. W. Brodbeck? He had come out from Los Angeles to meet the car-load of bee-keepers and ride in with them. We had never met Mr. Brodbeck before, though we had had a pleasant correspondence acquaintance with him for years. We are glad that so good a man is to succeed us in the secretaryship of the National Association next January. Mr. Brodbeck is a man that not only California bee-keepers, but all the rest in the whole country, may well be proud of.

We arrived at the Natick House about 6 p.m., and after supper went over to Blanchard's Hall, on Broadway, where the sessions of the convention were to be held. At the appointed hour the room was well filled, and "then the music began." The orchestra of the Sunday-school of the First M. E. Church of Los Angeles was present, and the music they rendered was surely inspiring. The superintendent of the school was seated near the rear of the room, and evidently enjoyed the program. By the way, this superintendent was none other than Dr. H. W. Brodbeck, a brother of Geo. W., and one of the most pushing (and doubtless "pulling," as well) dentists on the Pacific Coast. We will have more to say of Dr. Brodbeck later on.

As has been already announced in these columns, the evening session was presided over by Pres. T. O. Andrews, of the California Association. It was a very enjoyable evening. Everybody seemed happy, even if it was too awfully hot for comfort. It was an unusually heated spell for that locality—at least that's what those Californians said, and, of course, we had to believe them, as they ought to know. We didn't. All we knew was that if that was a fair sample of the glorious California climate we have heard so much about, we could find the same thing without going over 2000 miles away from home.

But after Prof. Cook and some others had given us all such a royal welcome, and after we had met a number of the extensive bee-keepers—extensive both as to bees and good-nature—that were present, we felt quite at home, and decided that we were going to have a good convention. What with Cook, and Harbison, and Corey, and Brodbeck, and Mercer, and Mellen, and Mendleson, and McIntyre, and—and—well, so many other genial Californians, who couldn't have had a good and profitable time for a few days?

But as to what was done and said during the convention, that will be found in the regular published report which is now appearing in these columns. In some ways it was the greatest convention of bee-keepers ever held on this continent, or in the world. We were glad to be permitted to be present—to be one of that goodly company. We will never forget it. We will look back to it for years to come, and only wish that we could have remained several weeks after the meeting, instead of only two or three days. But a weekly paper requires constant attention, and lots of "copy," so it was necessary for us to hasten home instead of visiting, as we would so much have preferred to do. The next time we go out there, we hope to be able to stay a month or so.

Some after-convention experiences will be reserved for our next week's installment of these notes.

Convention Proceedings

THE LOS ANGELES CONVENTION.

Report of the Proceedings of the 34th Annual Meeting of the National Bee-Keepers' Association, Held at Los Angeles, Calif., Aug. 18, 19 and 20, 1903.

(Continued from page 615.)

CO-OPERATIVE MARKETING.

Prof. Cook—If any of you would like to ask any questions, I am sure Mr. Reed will be glad to answer them.

Dr. Miller—It is now 10 minutes of 11; some of us have come a long way, and we have not struck any bee-talk. We don't know about oranges; we don't care about oranges, but I want to say to you that I feel like giving a very hearty vote of thanks to the citrus producers in general, and to Prof. Cook and Mr. Reed for talking to us about oranges. They have blazed the way that we ought to go. If we heard nothing else in this convention, and could go away feeling that something was going to be done as they have done, our coming would not have been in vain. I want to move a standing vote of thanks to Mr. Reed.

Motion carried.

Dr. Miller—I think there is a string of questions about that long [indicating by extended arms] that we would like to ask him, but I believe we are ignorant; we do not know what we want, and if there is anything in particular—I am all at sea—I do not know what is the right thing. If any of you know more than I do, and can ask questions, go ahead. I feel there is a great deal to be said on this subject.

Dr. D. W. Edward—At a number of meetings that I have had the pleasure and privilege of attending of the bee-keepers, I have heard this matter thoroughly discussed, and I respond heartily to the vote of thanks. However, this is the National Bee-Keepers' Association, not a citrus fruit convention. I am interested in both in a financial way, and I would say, that so far as my interest in the honey is concerned, the only interest I feel in this subject is in a lecture on the orange and lemon blossoms. It seems to me we are ignoring the fact that whatever this is, it has existed for years, and there is already an organization which is doing business to-day successfully operated by honey-producers exactly on the line that has been suggested, and which has been entirely ignored, so far as this discussion has gone. I would like to hear from these men of their organization, so that they are all converted to the idea of co-operation, or organization to carry out the same ideas advanced by Prof. Cook. And if that has been the beginning of the citrus fruit growers' association, why go back and rehash all that—why not go back to the bee-question?

Prof. Cook—I do not agree with the gentleman one bit. We have formed here a honey association, but it is just started. We want to form on something akin to that that has succeeded. In all essential respects they are just the same—it is the marketing of a product produced by people. If these honey exchanges had been of long standing, we would not say a word about oranges. We have an organization that is in California. This is the United States! We want to touch questions that affect the whole country. One year ago this came up the first time in the National Association. It is a new thing, and we have nothing to refer to in bee-interests, and in this fruit exchange we have an example, and that is why I wanted Mr. Reed to come here this morning. These bee-men have a year or two at the most; they have just started. Our friend, Mr. Brown, went to Denver, last year, and stirred up the whole country. But it is very little we have done—hardly anything yet.

T. O. Andrews—Has your co-operation, the Citrus Fruit Exchange, worked much of a revolution in the freight rates? That is one of our difficulties.

Mr. Reed—No, we have not. We are practically owned by one railroad. We have done a good many things though that have aided and helped us at times in the rate business. There was one year we asked for a special rate to fight the foreign oranges. They gave it to us for four months, and that was the first time citrus oranges had been introduced to any extent. We went into the New York market and drove the foreign oranges out of it. Then the lemons. Without our fruit exchange we could never have accomplished what we did. I believe the citrus growers owe to the organization of the Southern California Fruit Exchange more than to anybody or all else together, the fact that they organized and could fight for a tariff and get it.

E. T. Abbott—I do not believe in anything he says—that is, in his theory. I want to talk about it later. I want to say, however, that in the five days travel it took me to get here, I have only traveled in a portion of the United States. I live in the center of the United States. The United States is a little portion of the territory covered by the territory of this National Association. This Association does not belong to the United States. It belongs to Canada, also. And to use illustrations by what has been done in a little patch of country that is not as big as a little neck of New York, is all fallacious.

F. E. Brown—I had not expected to say anything at this time; I have made no preparations whatever, but I am to have the opportunity of saying a few words along these lines. I am sure, as has been stated by Mr. Abbott, that this is a great question. It is one that has great magnitude. It reaches over a large space of territory, but at the same time there is not so much more business transacted by the honey-men than there is, perhaps, by the Fruit Exchange. But it is also true that the citrus fruit industry is centered in one locality, so to speak, while ours is spread out; but I do not see that this matters so much. I have been much interested this morning by the talk of Mr. Reed, because experience is a great teacher, and if we can profit by this experience, it will save us money; it will save us time, and a great deal of time, and a great deal of annoyance.

Now, I say to this assembly, we are inclined to believe that because we are producers of honey we are capable of transacting and carrying on our own business, regardless of the fruit-growers. This is a pride that we have of ourselves. This is all right. I am glad we have ambition along these lines. And while the fruit-man has organized, and while his organization has been a success, it has not been due to previous experience, as Mr. Reed has told us. But he said, "We have men of brains," and, ladies and gentlemen, *we* have men of brains in our ranks.

Now, while our honey interests are situated in localities from California to Maine, it is necessary for us to organize in localities. We believe this is so. Prof. Cook believes this is so, and he is writing along these lines. We are organized, and we will organize in localities. We will organize and transact business in localities. Then we will simply take hold of hands and march along to success. Is not that reasonable? Is not that so? Look at the association in Colorado. They are a strong organization that any bee-man should be proud of.

Look in other localities—Central California I should not pass, because I am from Central California. I have worked in that association from its beginning, and we have made a record that I am proud of, and I am glad to say it to my brethren here to-day. Look at Southern California—some 200 to 300 miles away from Central California. They have made a beginning that we bee-keepers of the Pacific Coast should be very proud of. It is a good thing. They are doing well. Look at their name—The California National Honey-Producers' Association!

Dr. Miller made this remark: "What is that word 'National' attached to the Honey-Producers' Association of California?" The explanation given was that in California they do things in big ways. The State is a world of its own. But that word "National" applied to the California Honey-Producers' Association means more than that. It is a handle to hold onto, it is a coupling to couple onto. When you start your association, start an association having a place by which it can be attached—coupled onto other associations, and we can be coupled together as one train.

I am not going to comment upon what Mr. Reed has said about this orange growers' association. They have worked a good work; they have succeeded splendidly. By local organization, local associations all united for a definite purpose and working together, they have wrought this result. There are matters of detail that we may incorporate into our association or not, as we please, but the thing is to organize, and have a place by which we expect to become a part of the National organization. The California National Honey-Producers' Association we expect will reach out into Arizona. Here is Mr. Ivy, he will have an association; and then we expect to reach out over to Mr. Harris, in Colorado, and I am sure he will be glad to couple on. Then there is Texas doing a noble work. We will go across the continent, spread out, and then we will take in all the honey-producers of this great land, but we can not stop there. We must reach out and take in Cuba. The Cuban question is one that we are "up against," and we must have that in our association. It does not matter about distance. Distance is nothing to-day with our rapid transportation and rapid communication. So, when we have these local organizations, and then means by which we can take care of the goods, there is no impossibility about it—not at all!

Now, regarding the selling agency, just a word. Any local associations to-day have to place their goods upon the market somewhere. They do not keep them. Now, my own experience lately: I have a crop of honey in Southern California to sell. We are holding it for better prices. We expect this, for the people around here who have not organized are selling to the commission men, and we, who have organized, will reap the benefit of the market. You, who are not organized, will see later on what you are losing, as you have in times past. But we have to market our honey. We have to sell it somewhere. We have a broker in Chicago, Boston, or New York. These brokers receive a commission for handling our goods. Now, the orange people may have salesmen, and their expenses will be about the same as that of the broker. What we want is a central selling agency that may direct the selling of these goods, and then a man in New York, who has been accustomed to sending to him, can simply place his order with the central selling agency for a car-load of Central California honey. We can deal with the selling agency, and then it is safe. We can not always tell what our brokers will do, but when we have our selling agency, there will be confidence established, so that any man will be willing to trust his goods to that selling agency.

Prof. Cook—I am glad that Mr. Abbott does disagree with me, because there wouldn't be any fun if we all saw these things alike. You have heard the old story: Tom and Bill both enlisted in the army. Tom said, "I always did like war; I was a single man, and so I enlisted." Bill said, "I was a married man, and I like peace, and so I enlisted!" But we want to work together, and start right out. We have to convert the whole country—not like California and Colorado. We want to take in the whole country, and can do it. Another story: Two men leaned over the wharf to catch the fish. When the fish began to pull on the lines, one said, "I can't swim; I am drowning!" The other said, "I can't swim, and I am downing, too; but I am not making such a blamed fuss about it." I hope you will all go home and make such a fuss that the whole country will hear it, and that we will have such an organization of the whole country as you have had in Colorado so successfully for the past three years, and such as the Citrus Fruit Exchange has had so successfully in Southern California for the past six years. This is going to be a great work, but I think the time of the real fun in life is getting under a big load and raising it—under a great problem and then make it move.

Mr. Abbott—This discussion seems to be drifting in the way of unionism. The unions always get things in their own hands, and then it means, "Go the way they do, or die!" This morning we seem to have been served notice that the other side can not be discussed. I want to say that I am first, last, and all the time opposed to turning over this National Bee-Keepers' Association to any kind of an association that simply means the dollar. The world is all striped over with the dollar-mark. If there is not a dollar-mark to measure the value of a thing, it has no value! I believe in keeping the National Association free from the dollar-mark. I do not believe in sending it out on a mission of money. It has a better mission in the world, and I hope to see it fulfill that mission. If you purpose to put it on a basis of commerce, you will simply go to the wall.

A few years ago, Mr. Root said I helped to make the National Association. At the first meeting we ever had this question was up, and it has been talked more or less ever since, that we would have a great Central Honey Exchange, and sell our honey at our price. All the citrus fruit is produced in a little space in California. You have about 50 percent of the citrus fruit-growers in this Citrus Fruit Exchange. When can you get 50 percent of the honey-producers into such an exchange? You can not get 50 percent of them into an organization in a thousand years! Then you and I will be dead and gone, and will not care so much for the Almighty Dollar as we do now.

This is a day when we try to minify the individual—a day of socialism, when men have nothing to do but theorize. The atmosphere is charged with it all through from Missouri up to where the waves surge against your shores. But there are high moral principles that lived before these things were, and they will live after these things are gone, and the only thing I have to suggest is that all these "isms" are self-destructive. If they were not, I believe all these combinations would force upon us the bloodiest war that ever has been known. We have had some of these combinations, which have called out every man in the town belonging to their union, simply because one man claimed the right to support his wife and little babies. What did the walking delegate say? "We have killed other towns, and we can kill this!" This is the other side of the question, and it is a serious side. It means danger to the people of this country, and it means serious danger. It is not a question of efficiency; it is not a question of ability; it is simply a question of compelling men to belong to the union whether inferior laborers or not, and when I employ a man to set up my paper, I dare not ask him whether he is a good printer or not. The only question is, "Do you belong to the union?" This is the spirit you are falling in with, and when you have gotten through you are just where you commenced. I do not want to disagree with all of you, but I want to say, Be careful; the Almighty Dollar is not all there is in it. We do not want a commercial organization, bound by commercial rules, said to be governed by honest men. Do you know, dishonest men sometimes get into strange places? Did you read about the minister that ran away with the missionary money—$70,000—and went away to die in disrepute? They thought honest men were handling that money. All of these things are to be considered. This is the other side of it, and I just want to leave this word of warning: When you turn the National Bee-Keepers' Association over to an organization to sell honey, you will simply put it where it will lose its power in the world.

Jas. U. Harris—I see Mr. Abbott has to be "shown." I feel astounded to see that any man would come on the floor of this convention and try to throw anything in the way of the horny hand of toil. Everything that is brought forward in the way of wealth is done by the laboring man. The capitalist of this country is organized. You may have bad, you may have good, in all these organizations. You have bad, and you have good in your churches. But, for heaven's sake, when we go to work like the honey-producers of Colorado, and the fruit-producers of California, let each and every man put his shoulder to the wheel and help along. The time has come when the farmer, the merchant, the bee-man, and all others have to protect their babies and their homes on the lines that have been argued here this morning. Let me say that we are not going to turn this institution into any financial institution at all. The honey-producers' association of the United States will be distinct and separate from this organization. But it is a stepping-stone to help every person who engages in this industry to get what is right, and what is just for his product.

C. P. Dadant—I do not believe, when we organize, that it is possible to separate ourselves from the Almighty Dollar? Organization, association, is the order of mankind. There are very few not organized in some way or other. I belong to the National Bee-Keepers' Association. Most men belong to some secret association, some life insurance company. When a man insures his life, he insures it so his wife and little ones will have something when he dies. Is that wrong? But that is an organization with the Almighty Dollar in view. But I do not believe we can get our association in that shape yet.

Dr. Miller—I wrote a letter to my wife this morning.

That is nothing; I have written 15 others to her since I left home. And I put it in a box down here. By and by a man will come around and he will pick out that letter, and he will take it over to a big building that is here. He will put it in there, and he will put it in a certain place, and it will be taken on the cars and go from one man to another and be taken about 2000 miles and put it into a little office in the town of Marengo. I live in the country, and there will be a man there who will take that letter and put it in the box out where I live, and somebody will take it out of the box at my house. And what do you suppose I paid for that? I paid just 2 cents! [Laughter.] And that is co-operation!

Frank Benton—I wish to say that the foundation of this country is on co-operative principles. We are all together. It is a co-operative government, in our post-office facilities, and in all departments of the government. And why should we stand out as an organization? We are "up against" the railroad combine, the tin combine, and even the boxes that hold our honey. That being the case, is it not necessary for us to get together and buy in large quantities, and buy these things at the minimum cost? It does not necessarily increase the cost to the man who eats it. We minimize the cost of production all the way around, and sell the honey to the individual at the same price he is paying to-day. I believe it would be possible so to minimize the cost of producing, packing, and all expenses, as to realize more than three times the actual profit that we are making at the present time. Why should we not co-operate?

J. K. Williamson—There is one matter of co-operation we should have the benefit of right here at the convention. We are entitled to reduced railroad rates, and if each and every one had gotten a receipt for his ticket, what we could have saved in our railroad fare would almost have paid the expenses of the convention. And we want to impress upon all to take a receipt for their railroad tickets and bring them here. If we have over 50 members present, we are entitled to reduced rates.

A. F. Morley—I have given this matter a good deal of thought for a few years, from a remark I heard a speaker make, and I believe it is a fact, that we never get around in any shape only as we drift with the tide. And when one little company of five or six go to shift the other way, they will simply miss the track.

Albert B. Mellen—I agree heartily with Dr. Miller. I agree heartily with Mr. Abbott. Now, that is queer, isn't it? We are working to raise the price of honey to meet the raise in the price of everything else. That is exactly what the stock-brokers are doing in Wall Street. Up, up, up! Bound to fall! Dr. Miller says he can send a letter from here to Illinois for 2 cents. He can do more than that. If they can not find the party to deliver it to, they will bring it back and chase him around for two years to return it to him, and it will only cost him the original 2 cents. The fare from New York to San Francisco is about $100. It has been demonstrated that passengers can be carried for $2.50. Now, instead of working the price up, let us work the price down. When you get the price of honey too high, very few people will buy it—can not afford it. If we could sell honey at 5 cents a pound, and could ride from Los Angeles to New York for $2.50, we would be making more money than we do now. It is not the amount of money that we get, but the amount we get for our money that tells the story. They are raising the price of everything, up, up, up. Now, if we are going to co-operate, let us be co-operated. I do not purpose to run this thing into politics, but let us run it into universal co-operation.

Pres. Hutchinson—I will announce the committees, and then we will take a recess:

On Amendments—J. U. Harris, W. F. Marks, George W. Brodbeck, Udo Toepperwein, C. P. Dadant.

On Memorials—Dr. C. C. Miller, Prof. A. J. Cook, N. Levering, and M. H. Mendleson.

On Resolutions—J. M. Hambaugh, A. I. Root, and H. H. Hyde.

On Publicity—Emerson T. Abbott, L. E. Mercer, and J. F. McIntyre.

An adjournment was then taken until 2 p.m.

(Continued next week.)

Amerikanische Bienenzucht, by Hans Buschbauer, is a bee-keeper's handbook of 138 pages, which is just what our German friends will want. It is fully illustrated, and neatly bound in cloth. Price, postpaid, $1.00; or with the American Bee Journal one year—both for $1.75. Address all orders to this office.

Contributed Articles

Bulk Comb Honey—Eucalyptus Trees.

BY PROF. A. J. COOK.

MR. P. G. CARTTER, a subscriber to the American Bee Journal from California, keeps a few colonies of bees, and is also a dealer in honey. He asks me to express myself, through the Bee Journal, on two propositions. He sells much bulk comb honey. He puts this in pails and fills the pails with good extracted honey. He finds a ready sale at a good price. He asks why not put most of our comb honey in this way on the market, in lieu of the common sections. He also wishes to know if it is practicable, and, if so, desirable, to place nice glass jars right on the hives and have the honey stored in them all ready for market.

Years ago it was quite common to sell bulk honey in the fashion suggested above. The fact that such sales are now very rare, and very rarely attempted, shows that in the evolution of our present methods this one has become nearly extinct, while the sections have come to the front everywhere. This, alone, would prove that for the average and general market the sections are preferable. The reason for this is not far to seek. There is something exquisite in the neat, white sections as they are seen in the retail grocery. Their very looks are a bid for purchase. In the dining-room a dextrous cut removes them, and we have the immaculate, irresistible comb honey of just the right size right on the china, with no daub or untidyness, all ready for the most fastidious guest. Not so the bulk comb honey. It is taken from the pail all smeared with liquid honey that has surrounded it, which would not please any housewife, not to speak of her guests. More, it is not trim and neat in form, and certainly could never hope to compete on any table, or with any lover of such sweets, with the exquisite comb, clean and trim, just as it comes from the section.

Again, this bulk comb honey, with its old-time retainer, has an unsavory history. I think it originated with the Perrines, in Chicago. They put it in pails or jars and surrounded it, not with pure extracted honey, as our friend suggests, but with honey heavily adulterated with glucose. The Thurbers, of New York, who afterwards sold much of this kind of honey, defended the practice in the fact that such adulterated honey would not candy or granulate, and so would be preferred in the market, while the chunk of comb would push the fraud on the market and table. They did not say, however, that the far cheaper glucose sold as honey, and for the price of honey, secured a profit, which, though illicit, was no light weight as an argument in favor of the practice. A loud complaint was uttered, and the Thurbers consented to the abandonment of the practice. I fear that extracted honey is still largely adulterated with glucose, yet I think there is very little, if any, sold in this fashion. If it were, I should raise my pen and voice hard and loud against it. I am sure that two good counts can be made against such frauds—counts other than that adulteration is a fraud, and so the Devil's own business:

First, honey adulteration with glucose is not wholesome, else why is it fatal as a winter food for bees? and, why do bees refuse to take it, if they can get any other sweet? Although high chemical authority has defended the wholesome character of glucose as a food, the bees themselves refute the statement.

Secondly, the glucose, either of honey or candy adulteration, leaves a peculiar, brassy taste in the mouth, which will soon create a distaste for such honey, and thus a double thrust at the honest bee-keeper; it requires him to compete with an unwholesome, cheapened product, and with a product that is sure to "bear" his market. Let us all not only denounce this and all adulteration, but let us raise our most emphatic protest against it every time and place, and on every occasion. Let us continue to urge with renewed vigor until we have the best and wisest *National pure food law.*

As this form of honey adulteration is no longer practiced, so far as I know, I see no reason why any may not sell bulk comb honey in this form if their market warrants or suggests it, yet I feel sure that they must, perforce, keep the incomparable section-honey out of sight, or their sales will not be very heavy. Hard, manual labor, and the keen appetite of youth, especially when coupled with a scant purse, may furnish a market for a limited supply.

BEES STORING IN GLASS JARS.

There are several reasons why it will never pay to secure our surplus in glass jars by the bees. The jars are too costly; the bees are not as ready to enter and store in them; and the stain on the glass as it is made a foot-path for bee-travel, would make the jars uninviting. Cleaning would be far too difficult and laborious, in the nature of the case, to be practicable. For exhibition purpose at fair or exposition this may pay, for then we can afford the labor to make it neat and attractive, but as a general proposition it will never find favor, I am sure.

EUCALYPTUS.

Mr. H., of Corona, California, asks what eucalyptus I would suggest for honey. I am glad to answer this, as this beautiful tree should be planted far more extensively in our State than it is. There are fine blocks of it scattered here and there all about. There should be groves of it thickly set all about us, and the streets should be lined everywhere by these fine trees. Beauty, comfort and climatic influence all loudly favor such tree-planting. The blossoms are showy, persist for weeks, and can be had, by careful selection in every month of the year, and are all attractive to bees. I would suggest Eucalyptus corynocalyx. This grows rapidly, furnishes fine timber, and is known as the sugar-gum. E. rostrata, or red-gum, is very useful for timber. E. Sideroxylon is very handsome, graceful, has exquisite foliage, and may well be planted. This and E. ficifolia have beautiful-colored blossoms. E. crebra, E. diversicolor, E. polyanthemos, and E. Gunni, all are worthy a trial.

E. diversicolor, E. rudis, and E. Gunni stand much cold, the first enduring a temperature down to 8 degrees F., the others to 18 degrees F. E. citrodora is a fine honey-tree, one of the very best, and has a pleasant fragrance, but it will not stand much of a freeze, especially when young. We have fine trees at Claremont, but they killed down at first. They seem hardy now, for they stood a freeze down to 23 degrees F. last winter. I hope many will plant these trees. Los Angeles Co., Calif., Aug. 14.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Interesting Experiences of a Sister.

You want the experience of some of the sister bee-keepers. The last three days I have had considerable, but not pleasant. One of the tenants on one of my farms was taking surplus cases from his hives, and wanted to take part of mine off. Now I, for myself, like to take the honey from the hives late in the fall; it is cured better. And now I want to ask some questions:

1. We found the hive-body full of honey, and the queen gone into the supers and had reared a young swarm. If a queen-excluder was put on would it do to take part of the honey from below, or would it be better to add supers to make more room above?

2. I had two and three swarms in the air a day; Bokhara began to bloom, and then they filled the hive, but did not swarm. I wrapped up two supers and took them to a small town and called on a prominent attorney to sell honey. His wife was at a summer resort, and his boys did not like honey, but he concluded to take 4 pounds. We took the supers to a store to weigh the honey; when I saw the dark comb I felt as if 40 cents was a big price; but my next order was for $10 worth; he was a farmer; it was for chunk honey. So I shall reverse and sell from below. Will additional supers prevent late swarms?

3. Bees are very busy now on goldenrod. I had some colonies in the supers last year, and they used up what honey there was above, and they would not go down for supplies, so the brood ought to be below; they had plenty, but seem to go up when in the cluster for winter, and when they got to the cover could go no farther. Should a queen-excluder be put between the surplus and brood? What will make them build straight in the sections?

The help was threshing Bokhara seed to ship, so I thought I would send some beeswax, too, and came very nearly having a fire. I left the melting wax to get some corn to cook, and it boiled over, and burning lard is not equal to the blaze I had upon getting to the door. I seized a pitchfork and lifted the blazing can from the fire. A sun extractor would be far more safe. So you see what I don't know would fill a big book; but experience is a variety—some pleasant, and some otherwise.

After I got the honey and brood-combs out of those supers I put them into a tub of water and scraped them with a table-knife, sections and section-holders, and put on a duck coat and leather mittens, a bee-veil, straw hat (with a brim), took the smoker and went to put them back in the hives, as the bees are building four combs of honey under the alighting-board out-of-doors. I have tiered up three supers to the hive; I put them all on but the last one without a string; it was a big colony of Italians, and they were filling a super every two weeks; they covered me, so I started for the house, pulling off my bee-veil and leaving it on a bush as I went. I got to a tub of water and put my head right into it until I had drowned the bees, but my face, neck, ears and hands are twice the size they ought to be. One eye was closed one day. I bathed my face with cold water, and kept a folded towel, wet with cold water, on my head until the pain subsided; but it was awful for a short time. But I got the super on and the cover, too, later in the day. Now I think a large hive, and surplus room put on in the spring, and then leave the honey on until late in the fall, are better than small hives and to have to keep putting on supers.

Minnie Peet.

Wabaunsee Co., Kans., August, 1903.

If you find that your customers prefer to have their honey in combs with dark cappings, it will be all right to leave the honey on till late. The honey itself will be a little richer and riper. In general, however, the demand is for honey with cappings snow-white, and to secure such honey it should be taken off as soon as entirely sealed.

It is an unusual thing for the bees to change their brood-nest into the upper story, but in the case you mention, it would be just as well to take the honey from the lower story as surplus, providing, of course, that you desire the honey in such form as bulk honey, and providing that the comb was not too old. Otherwise the best thing would be to put the queen below, and make her stay there by means of an excluder. The honey might be extracted from the brood-combs, at least enough to give the queen room to lay, or, if you prefer, you might oblige the bees to carry the honey above, aiding them by uncapping the honey in the brood-combs. In any case see that there is plenty of surplus room above.

"Will additional supers prevent late swarms?" No amount of super room will make them safe from swarming, but it will help; for being crowed is one of the things that makes them want to swarm.

"Ought one always to put a queen-excluder between the surplus and brood?" When working for section-honey it is not needed; but when working either for bulk honey or extracted, use one.

"What will make them build straight in the sections?" Use comb foundation in the sections, either as starters or full sheets.

* * *

An Ephesian Coin and Its Fable.

Various were the ways by which the site of certain cities were determined. For instance, the Palatine Hill became the original site of the Mistress of the World, because Romulus was so fortunate as to have seen a greater number of vultures than Remus had beheld. Cadmus, obeying the oracle, followed a cow, and on the plain where she stopped built the city of Thebes. Ilus also followed a dappled heifer, and on the "hill of Ate," where she layed down, he found his city of Ilium.

But it was once reserved to designate to man whereon to build his comb foundation, as it were. A tradition preserved by Philostratus, relates that when the Athenians led their colony to found the city of Ephesus, the Muses in the form of bees flew before them, directing the course of the fleet.

Such is the fable explanatory of the figure of a bee executed on the ancient coins of Ephesus. Such is the story, appropriate and beautiful, woven about the coin of that

Ionian city once called "the light of Asia." The Ephesian coin engraved in Humphrey's "Coin Collector's Manual"—representing the stag on the obverse, and the bee on the reverse—belongs, we are told, "to the finest period of the monetary art as practiced at Ephesus, probably soon after the invasion of Alexander, when the Greek cities of Asia Minor were relieved from the thralldom of Persia."

How one's fancy pictures forth the progress of that Ægean fleet! What a dainty and delicate theme for poet and painter! A theme, indeed, to be expressed in the softest and most exquisite of touches! And then, too, how the mind pictures the end of that bright voyage, and fain would believe that—

> "The melodies of birds and bees,
> The murmuring of summer seas,
> And pattering rain and breathing dew,
> And airs of evening,"—

voiced their welcome to that Athenian band, who were divinely led under the sweet guise of bees, by the daughters of Jupiter and Mnemosyne. KATE V. AUSTIN.

Wayne Co., Ind.

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, Ohio.

LATE CURING OF FOUL BROOD.

McEvoy's assertion that foul brood can be cured in October by simple substitution of the combs, appears on page 517. It helps a bad situation to the extent of giving an alternative method. He thinks the new combs given should be entirely full and capped, lest the bees store somewhere a patch of brought-along honey, and omit to use it out again.

He sometimes succeeds in increasing the total number of colonies at the same time that he is effecting a cure. But, say, I guess he ought not to encourage hopes in that direction on the part of the ordinary bee-keeper. O. b.-k. will damage his prospects of curing in his lust for increasing, if that flea is cultivated in his stocking.

LAMBOTTE'S FOUL BROOD IDEA HIT HARD.

Thos. Wm. Cowan's knock-down argument to Dr. Lambotte will bear repeating. *Bacillus Mesentericus* is everywhere. If it were the cause of foul brood we should hear of foul brood wherever bees are kept. The fact is, that there are many regions and countries which are clear of it. Page 519.

RIGHT DRESS FOR BEE-KEEPERS.

"Eyes right, right dress!" Somebody shout that same to some of the Brothers—considering the efforts the Sisters are making to arrive at right dress. Page 520.

BURNING OUT THE MOTH-WORM.

So "Illinois" set fire to one of his hives in his vehemence to be rid of the moth-worm. Ruefully admits that it was hard on the bees, but seems not to consider that dousing the establishment with lye would be a little hard, also. When I hear of such strong measurers I think it most probably a case which had got beyond all remedial measures. There is a time when the concern should be closed out. Shake the remnant of poor, old, queenless bees into an empty hive. Burn the rubbish in a fire, not in the hive, but near by. Put the salvage in tightly closed quarters—which must be looked over frequently, or it won't continue salvage long. Page 521.

HOME-MADE GRAPE-NUTS AND POSTUM.

So bread soaked in honey and toasted brown in the oven is Grape-Nuts; and crust soaked in honey and toasted extra brown is Postum. No danger of the former being worse than the Grape-Nuts I tried to eat lately. I found Grape-Nuts good when it first came out; so I guess it spoils quickly with age (insoluble, and too hard), and that the grocer gave me some that was too old. If we can make it ourselves we can have it perfectly fresh; and, perchance, that's about the only way we can have it fresh in many cases. As I am a regular health-food fiend, I should enjoy reading lots of actual experiences on this line. Guess the average reader would tolerate some. Thanks to Mr. S. Trowbridge for his lead-off in the matter. Page 524.

THINKS ONE BACHELOR CAN'T COUNT.

Near relation to the boy who saw 500 cats in the backyard, is Brother Beverlin, if we read him correctly on page 526. His 115 swarms of bees at one time need counting by a man who didn't have his hands in the single-blessedness bread at the time. Thus, might we have a more cool, sober, and reliable census.

SPRING KILLING AND BALLING QUEENS.

A. G. Young is right to caution about getting queens balled and killed in early spring. (This last queer spring seems to have cap-sheaf for such work.) We have most of us practiced and recommended an early looking over of the frames and a cleaning out of the bottoms. I don't know now whether that practice is to be recommended or reprobated. Page 526.

REPRESSING THE SWARMING IMPULSE.

Will foundation or comb do the more to repress the swarming impulse? Which, indeed? We know that abundance of clean worker-comb right at hand is a strong repressive. Can we quite say that we *know* that thing of foundation? I kind o' guess that for a few hours after being put in foundation is *provocative*—to become a repressive later on when worked out. Half enough of either one thrust in the heart of the colony—'spects we don't quite know that that is repressive at all. Page 531.

THE UNCERTAIN DOINGS OF BEES.

I've seen somewhere a vivid account of the interior of a hive when bees were fanning and roaring by night. Each bee full of nectar, and gently protruding a minute drop on the end of the ligula and then drawing it in again, and so on indefinitely. (May be it's romance I've picked up.) Suppose there could be, by novel-writer's device, a hungry bee in such a hive. Then, suppose the hungry bee should flourish her liquid and knock off one of those little protruding drops—and, in defiance of all new laws, appropriate it herself. That would be bad, Mr. Arthur C. Miller. Bees are so enterprising, so multiplex, so do-nothing-invariably, so sure to be breaking out in a new spot, that I, for one, decline to take the risk of saying they never do a thing when that thing is manifestly not impossible. Page 535.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Reducing Number of Colonies.

On page 572, Sept., 1902, you tell "Pennsylvania" how to reduce the number of colonies in the fall. When you place the queenless colony on its own bottom-board over the "breeder," do you close up the entrance of the top hive? IOWA.

ANSWER.—No; the idea was to leave the entrance so the old bees could go back to their old place, leaving the younger bees in the new place. If, however, you wanted to have the older bees also used for strengthening, it would be all right to shut up the entrance, of course guarding against suffocation.

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Slotted Sections—Bee-Keepers' Associations—Management for Extracted Honey.

1. Is there any advantage in the sections open four sides, or open top and bottom only, or only on bottom? If there is any, what is it?
2. Do you think a bee-keepers' association would help us any? and how?
3. What do you think of putting the extra story under the main brood-hive to prevent swarming when running for extracted honey?
4. Do you think they store any less honey? VIRGINIA.

ANSWERS.—1. I don't know whether sections open four sides are much used now, but at one time it was claimed that with the four sides open the bees would have more free communication, and would fill out the capping to the wood better. The few that I tried did not seem to have this advantage. A section open top and bottom is absolutely necessary if you tier up. If you never use more than one super at a time the opening at the bottom would be enough.

2. There are many ways in which an association of bee-keepers is helpful, so many that there is no room to give them here. The National Association has helped to defend a number of bee-keepers who would otherwise have been obliged to give up bee-keeping, and it has helped to put down adulteration of honey. If it did nothing more, that is sufficient to make it the right thing for every bee-keeper in the land to send in his dollar to become a member.

3. Rightly managed, it may work very well.

4. No.

Section-Cases Under the Hive, Etc.

1. I notice in the Bee-Keepers' Review an extract from your book, "Forty Years Among the Bees," where you advocate placing the section-cases under the hive. If pollen, travel-stains or propolis does not bother too much this would be a good thing for northern Michigan bee-keepers, as the cool nights are not conducive to comb-building.

2. Which hive do you like best for comb-building, the Heddon or the Danzenbaker?

3. Have you ever tried the Boomhower, Doolittle, or the J. P Moore strain of bees? MICHIGAN.

ANSWERS.—1. There must be some misunderstanding. I think I never put supers of sections under the hive except to get the bees to empty the honey out of them, and that was not satisfactory, because the sections were badly dirtied. I should not think of putting sections under the hive to get the bees to store in them; most of all during cool nights.

2. Probably comb-building would proceed about the same in each.

3. I had some of the Doolittle golden, the most beautiful bees I ever saw.

Horse-Chestnut or Basswood?

Will it pay me to plant horse-chestnut trees for the benefit of my bees? or would you advise basswood? MINNESOTA.

ANSWER.—Basswood, by all means. No other tree will give you so much honey. A horse-chestnut stands at my door, and when in bloom is visited by a good many bumble-bees, but by very few hive-bees.

Getting Bees Out of a Cupola.

A swarm of bees have been in a cupola of a school-house near here for four or five years. They are mostly black bees; they have an unlimited amount of room, so that they never swarm, and there must be a bushel of them. Some say there are 500 pounds of honey up there. I have tried chloroform and sulphur on them, but can not kill them. I have a small hole cut through the cupola, and can see all the combs. What would you do under the circumstances to get the honey? I dare not use fire or smoke up there. Is there not some chemical stronger, more penetrating and suffocating? If so, what would you recommend? WISCONSIN.

ANSWER.—It would be a good deal easier to tell just what to do if one were right on the ground. Sulphur fumes ought to kill them, and chloroform should, at least, lay them temporarily, but it may be that you did not get the fumes directly on the bees for a sufficiently long time. Blown directly on the bees from a smoker, they ought to prove effectual. Bisulphide of carbon is stronger, but it would be just as hard to confine it to the bees in a large place. From what you say I understand that what you want is to kill the bees, and then there is no trouble about getting at the combs of honey. That being the case, put on a bee-veil and go right at the combs as if no bees were there; only have a smoker to drive the bees out of the way; cut off the combs, and brush the bees off. There ought not to be danger of fire from a smoker carefully handled.

Getting Rich in the Bee-Business.

Did you ever know any one to get rich in the bee-business? That is, if he made it his entire business, with nothing else to occupy his time? CALIFORNIA.

ANSWER.—Adam Grimm made enough from bees alone to start a bank, and there are a few men living to-day who are making a good deal from their bees. But, as a rule, if a man is living for money alone, he will do well to go into some other than the bee-business.

Preparing Bees for Shipping—Moving to a New Location.

1. If I ship I will probably ship 90 hives; the hives are 9-frame telescope, and we thought of putting an empty super on top, then a piece of thick, coarse cotton-cloth, the same as we use at home, then the cap, and nailing the cap on, and just as we are ready to load in the cars to put a piece of wire-screen cloth over the entrance. Will that be all right? Is that enough ventilation?

2. Will it be necessary to extract any honey? If so, how much?

3. How would you pack them? Would it be best to wad up coarse hay to pack between the hives, to act as a buffer to keep off the motion? But we expect to pack as solid as we can, anyway.

4. We thought of going somewhere in eastern Washington, perhaps near Sunnyside, where the winters will not be severe, and it would be a good place to keep bees exclusively, for my four years in the army have told on me, and I can not stand cold winters. What part of the country do you think would be best? MINNESOTA.

ANSWERS.—1. I'm not sure about the ventilation. If your hive-entrances are as large as mine, 12 by 2 inches, it would be all right. With an entrance as shallow as some, 3/8 of an inch, it would not do so well. Something depends upon how close the cap fits. If that fits tight, so that no air can pass upward, then a small entrance will not be sufficient for ventilation. You might cut a hole in the side of each cap and cover it with wire-cloth.

2. If the combs are old and tough, or if they are well wired, there will be no need of extracting; otherwise it might be well to extract the lower half of combs heavily filled.

3. Hay packed in will be well, looking out that it does not interfere too much with the ventilation.

4. I have no knowledge of that country as to bee-pasturage.

Arranging Hives for Certain Space.

My apiary is situated west of my dwelling about 60 feet; it is 30 feet wide by 100 feet north and south, with evergreen trees west of the yard.

What would be the most convenient way to arrange the hives so as to put 100 colonies in that space? or is there room enough? I have them in rows north and south, facing the east, but had thought of changing them and facing the south. How close could they be arranged and do well, and have room to work back of the hives? ILLINOIS.

ANSWER.—The best way I know of to give plenty of room between the hives and yet get them on a small space of ground, is to have them in groups of four, as given in "Forty Years Among the Bees," pages 95, 96. As I understand it, your ground is longest north and south; so let a row run north and south facing east, two hives close together side by side, then a space, and then another pair, and so on. Then another row, back to back, close up against this row, will face west. That will make a double row on each side of the yard, with perhaps 15 feet between the two double rows, and with more space than is needed between the hives to work at the side of each hive; for I hardly think you will want to work at the *end* of a hive.

Packing for Winter—Unpainted Hives.

1. When using outer cases and packing with some material for wintering, has sawdust been tried as packing?

2. If so, is it a success?

3. If not a good material, what are some of the objections?

4. Does a bee live long after it has stung and left the sting?

5. In answer to one of my former questions, you said you preferred unpainted hives, because you thought the bees better off in them, but you did not like the looks of them. Now, in what way do you think the bees better off in the unpainted hives?

6. If in unpainted hives they would produce more honey, ought not looks to be of secondary importance? MICHIGAN.

ANSWERS.—1. Yes.

2. Not in all cases.

3. Some complain of dampness.

4. I don't know just how long, but a considerable time. The injury does not seem alike in all cases. If my memory serves me, some one made the experiment of confining bees that had lost their stings with others uninjured, and there seemed no very great difference in the length of time the bees lived.

5. I don't know positively about the matter, but I think the hives have a better chance to dry out without the paint, and in a very limited experience I found that bees did not winter in a cellar so well in painted hives. Of course, it is possible that the paint was not at fault. Another objection is the cost, which might not be an objection if one were sure that one would not want to change hives within 25 years. But I found I made a mistake when I did not paint wooden *covers*.

6. That depends. An amateur with a few hives on a well-kept lawn should keep hives neatly painted. A large apiary kept for the money that's in it, is another matter.

Sour Honey—Keeping Honey—Swarming—Out-Door Wintering.

1. Herewith I send a sample of extracted honey which has lost its flavor; I have 150 pounds like it. It has been kept in a tank with a board over it. Do you think it soured because of insufficient ventilation?

2. I had a little comb honey in cases which had the same taste. Is it regular sour honey, or do the bees work in something to give it this taste?

3. How is the best way to keep comb and extracted honey? Can it be kept in a shop without fire ordinarily in this climate? This year has been cold and wet.

4. There is a locality, a few miles from here, where there are acres and acres of goldenrod, lots of heartsease, touch-me-not, and considerable buckwheat is raised; clover and basswood are nothing extra. Is there any practical way of keeping the bees from building up to swarm in June or July, and getting them up to their best about Aug.

25? If left to themselves I think they would be strongest just between clover and fall flow.

5. How do you think bees would winter out-of-doors with oil-cloth over the frames, sealed down at the sides, with a super of chaff on top? I use these all summer under the covers; they are very convenient. Would they do as well as a thin board sealed down, if covered with a chaff-packed super? OHIO.

ANSWERS.—1. I should hardly say the honey had lost its flavor, for it has a pretty strong flavor, although not the very best. Judging from the sample, it was probably extracted when hardly ripe enough, the ventilation having perhaps nothing to do with it. Very likely you can improve it if you subject it to a pretty high temperature, not covering it closely. Try setting it on the reservoir of a cook-stove. But don't put it where it will be heated to more than 150 degrees. A mild heat applied for a number of days is the thing wanted.

2. What you probably object to is principally the flavor of the honey itself, perhaps accentuated by the lack of ripeness. There is very little souring in the case.

3. A hot, dry place—at least have the place dry, a place where salt will keep dry. It ought generally to be all right in Ohio, in a shop without fire.

4. It ought not to be a difficult matter to keep colonies weak till August. All that is needed is to start a sufficient number of nuclei, and then draw frames of brood to strengthen the nuclei and weaken the full colonies. But you had better try it on a small scale, for it is somewhat doubtful if you will like the results.

5. With a warm covering of chaff, you would likely find the oil-cloth all right, just about the same as a thin board.

◆

Weight of Colony for Wintering.

How much should bees, hive and frames—an ordinary 8-frame dovetailed—weigh in order to be strong enough in bees and honey to winter on the summer stand? NEBRASKA.

ANSWER.—For wintering in the cellar, I aim to have each hive with its contents, its cover, and its bottom-board, weigh as much as 50 pounds. For out-doors there should be 5 or 10 pounds more. If the combs are new, and if they do not contain much pollen, a smaller weight would do, but it is best to be on the safe side. A little too much honey in a hive for winter is just enough.

◆

Queer Experiences with Swarming.

1. On June 14, colony No. 111 cast a prime swarm (it was hived in a new hive). June 21—the eighth day—just at evening I cut all queen-cells from the old colony, cut the caps from the most advanced cells, and let the queen run out into the hive. July 9—the 26th day after the first swarm—they swarmed again; the swarm was just an ordinary-sized second swarm, and wishing to examine the comb to ascertain if possible the cause of the unusual occurrence, I run the swarm into a box and overhauled the hive. I found a little capped brood in three combs, quite a little on one side of one of the frames, and a few scattering cells of brood in two other combs and seven queen-cells, one of which had the whole side torn out of it by the bees. The cap showed no evidence of having been opened. One, from which a queen had lately emerged, two with dead inmates all turned black, and three with good, lively queens in just ready to come out, and five or six patches of drone-brood capped, but quite young yet. When I cut the queen-cells I had shaved the heads off all the drones, no eggs or uncapped brood in the combs. Can you explain the cause of the unusual occurrence?

2. What is the best method for handling swarms from the colonies three or four weeks old? I know you do not think such colonies swarm again the same season, for a correspondent asked you the latter part of the winter how to prevent new colonies from swarming again in about four weeks, and you said, Oh, but they don't. But, Doctor, they do with me, and with others around here, if there is any honey coming in, and I have tried every way I know to prevent it.

To illustrate: I got my first swarm June 13, and June 14 I had 10, and hived them in six hives June 15. Six swarms hived in four hives July 1; one of those colonies swarmed just 18 days after being hived; left the hive full of brood and honey, one super full, and the other well under way. The next day, July 2, two more of them swarmed, and up to last night (July 8) nine of those new colonies had cast swarms. Of course, it is awful, right in the height of the honey-flow, to have them break up that way, and something has to be done to keep them together. I am using now two methods—one is to kill the old queen, return the swarm, and then cut out the queen-cells the eighth day; the other way, I take four frames of brood from the hive and replace with four frames filled with foundation. There are objections to both methods—one is not always sure, the other you lose a valuable queen (for I think it takes a pretty good queen to fill an 8-frame hive with brood and eggs in 18 days); and it is not sure, either, if you happen to miss a cell.

Can you suggest any better plan? MINNESOTA.

ANSWERS.—1. When a queen is unsatisfactory, one of the first things is to rear a successor. A good many years ago I had a queen reared by a very weak nucleus. She laid just one egg, and that was in a queen-cell, and then she disappeared. Your colony swarmed 18 days after you let the queen out of the cell. That would hardly allow time for queens to mature from her eggs, and the only guess I can make is that eggs had been left from the old queen undeveloped until after the time of your overhauling. Dzierzon says that bees sometimes keep eggs in that way.

2. If I understand you rightly, a swarm was sent out by a colony which 18 days previously had been hived as a swarm. This, although not a very common occurrence, has been know from time immemorial, such a swarm being called a virgin swarm. That was not the thing I disputed, but I claimed that a colony would not swarm if it had a queen reared in the hive during the current year; and even in that it seems I was mistaken. The best suggestion I can make is to get into the hive a young queen after the harvest opens.

◆

Swarms—Introducing Queens.

1. How can that man in Arkansas get a swarm of bees in 14 days from a new colony when it takes 21 days to mature a bee?

2. I saw in the Bee Journal the way Dr. Miller introduced queens, by drowning them. I don't approve of that. My way is to place the queen in a cage, fill the hole in the cage with sugar, then put the cage between the top frames, and by the time the bees get her out they will be acquainted with the new queen.

I have had some experience with bees. Last spring I did not have any bees at all, but I placed some empty hives out and 2 swarms came to me; then I cut down 3 bee-trees and now I have 5 colonies in good condition. IOWA.

ANSWER.—1. It is hard to understand how a swarm could be thrown off by a swarm hived only 14 days before, unless a frame of brood were given to the swarm, which is not an uncommon thing. It takes 21 days for a worker to mature from the time the egg is laid, but only 15 or 16 for a queen, and if a frame of brood were present and a queen were started from a grub, a young queen might emerge in 12 days or less.

2. Your way is the usual one, and is good. I don't know whether the drowning plan will always succeed, but if it does there is a saving of time over your plan.

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Kentucky is far behind some of the other States in the matter of honey-production. There is no organization here, each "goes it" alone, and such a "go"!

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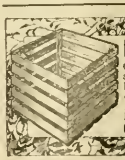

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It is not necessary to say that this state of affairs very seriously cripples the price of a nice article of honey.

I have 22 colonies of bees, and they did well this year.

There is much being said about the swarming problem; each writer has this or that to suggest as to the best means to solve this problem. For this locality, I find that to prevent swarming in any form is to be preferred. One strong colony that does not swarm will store 25 percent more honey than one of equal strength and opportunity which has swarmed or been "swarmed."

Bees will, in every case, attend to the wants of the brood-nest before they go elsewhere. To prepare this requires considerable time and labor, drawing out comb foundation in the one case, or building new comb from starters, or filling old ones with honey. While the brushed, shaken, or "shook" swarm is thus employed, the other being provided with a brood-nest "laden with stores and teeming with bees of all ages," is crowding the sections and storing their collections there.

To prevent swarming is, for me, easy of accomplishment. My colonies are made strong by stimulative feeding early in the spring. When they are about to swarm, an empty hive is prepared; if they swarm out, which they very often do, the queen is caught in a Miller cage, and a hasty examination is made of the brood-nest, there being, comparatively, no bees in the way. If a good cell is found, the comb is put in the prepared hive with another. Their places in the old hive are replaced by empty combs or full sheets of foundation. By this time the swarm returns to the old hive, the queen is released at the entrance, and all is well. Not one in ten will swarm after this operation. We not only prevent swarming, but we secure a rational increase in the apiary at the same time.

I do not desire to "forage" on your very valuable space, Mr. Editor, but beg to say a word about "bee-papers."

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C. H. W. WEBER Successor to CHAS. F. MUTH and A. MUTH.
2146-48 Central Ave., CINCINNATI, OHIO.

Please Mention the Bee Journal when writing Advertisers *****

he would know the bee and its habits. I attribute the slovenly manner in which bees are managed here to the lack of this knowledge. The American Bee Journal will call at my home as long as I can raise the price of its subscription. Its able editorials and articles contributed to it by some of the most able bee-experts of the age, and its general information pertaining to the bee-industry, make it one of the most useful, and at the same time interesting, publications of the day. If every man in Kentucky were to read the Journal, I believe her honey-production would, in a short, time be equal to that of many others of her sister States, for several of the honey-plants, especially white clover, flourish here as they do elsewhere. E. I. SMITH.

Warren Co., Ky., Sept. 4.

An Acknowledgement and Mulberries.

I gratefully acknowledge Mr. Hasty's suggestion, on page 602. His counsel is always on the side of reason, and I am ready to admit that I may have been a little premature in my conclusion. I fear that I am not cut out for a good missionary, but even now I would so amend my previous decision as to send a small plant of the white mulberry, as long as they last, to any one really interested in the subject.

The cuttings were, however, sent on *full letter postage*, and must have reached each applicant. Under the circumstances, our Uncle Sam generally does the "square thing."

DR. PEIRO.

Bees Did Well.

My bees did well this year. I got 1460 pounds of extracted honey from 18 colonies.

W. H. MOORE.

Smith Co., Tex., Sept. 19.

Had a Good Season.

We are having a good season. I have one colony that has stored 224 pounds of honey up to this date, and white clover is still in blossom, and the bees are working on it. This colony is in a 10-frame hive. N. H. VOGT.

Nemaha Co., Kans., Sept. 21.

Only a September Swarm.

Well, I was a sight to behold! My nearest friends were in a quandary whether I was Irish or Indian—and all due to that big swarm. No, it was so late we didn't expect them to swarm, did we? But they did, and the next morning, promptly at 9 a.m. There they were on that big cottonwood limb in my neighbor's yard—I was told of it after I left home, but couldn't leave the office to go catch a September swarm if it had been as big as a bushel basket—just what it looked.

But they waited for me, O yes, indeed; I energetically interviewed them a little while after 5 p.m. I first put an empty hive under that big limb for them to fall into, as it were; then I had that limb sawed off—and they did all the rest.

Now, I don't want to prevaricate, but if there wasn't a million bees all over me it certainly felt like it. After considerable investigation on their part, they found a hole in my veil just a little bit sooner than I did myself, and they weren't slow to get inside where I lived. Well, I'm not strong on English expressions, or I might enlarge on my feelings at that moment, and a good many moments after that, but suffice it to say I felt something as I imagine a toad with erysipelas must feel—hot and swollen. In looks I must have seemed a "peach"—a nice, fat Crawford, face round, full, not a wrinkle. The good wife, who afterward took a lot of stingers out of my neck, ears and protruding brow, intimated that I looked like a human pin-cushion. But I was too abstracted to resent the allusion; what I most desired just then was to get those hot stickers out of my hide. And all this for a September swarm.

But the real joke is, I never got that swarm. No, sir; they "riz," and went back to that same tree and hugged its trunk just above where the limb was, and there they remained *just five days to the very hour*—to see if I'd come back after them. Not much! At 9 a.m. on Labor Day, they took their flight, with the best wishes that occurred to me. and went West for tall timber.

Did you ever hear of a swarm locating in the manner mentioned? Cool weather, too, and nothing to eat. Those fool things have likely gone into some hole, and, owing to the late, inclement season won't get stores, and

Do It Quick!

$2.50 for $1.00

The Modern Farmer and Busy Bee, 50c;
The Western Fruit-Grower, 50c;
The American Poultry Journal, 50c;
Gleanings in Bee-Culture, $1.00;
ALL FOR $1.00

Sample Free

The Modern Farmer
St. Joseph, Mo

Please mention Bee Journal when writing

BARNES' FOOT POWER MACHINERY

Read what J. I. PARENT, of Charlton, N. Y., says: "We cut with one of your Combined Machines, last winter, 50 chaff hives with 7-in. cap, 100 honey racks, 500 brood-frames, 2,000 honey boxes, and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make, and we expect to do it with this Saw. It will do all you say it will." Catalog and price-list free.

Address, W. F. & JOHN BARNES,
995 Ruby St., Rockford, Ill.

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The Rural Californian

Tells all about Bees in California. The yields and Price of Honey; the Pasturage and Nectar-Producing Plants; the Bee-Ranches and how they are conducted. In fact the entire field is fully covered by an expert bee-man. Besides this the paper also tells you all about California Agriculture and Horticulture. $1.00 per year; 6 months, 50 cents. Sample copies, 10 cents.

THE RURAL CALIFORNIAN,
218 North Main Street, - LOS ANGELES, CAL.

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$5 TO START YOU IN BUSINESS

We will present you with the first $5 you take in to start you in a good paying business. Send 10 cents for full line of samples and directions how to begin.

DRAPER PUBLISHING CO., Chicago, Ills.

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The American Poultry Journal

325 Dearborn Street, CHICAGO, ILL.

A Journal that is over a quarter of a century old and is still growing must possess intrinsic merit of its own, and its field must be a valuable one. Such is the

American Poultry Journal.

50 cents a Year. Mention the Bee Journal.

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1 POUND PURE HONEY

Bottles, Jars, of every description....

—FOR—

Honey Dealers...

C. C. STUTTS GLASS CO.,
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145 CHAMBERS ST. NEW YORK. N.Y.
36E4t Write for illustrations.

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(Exact size of the Pen.)

FREE as a.... Premium

A Foster Stylographic PEN....

This pen consists of a **hard rubber** holder, tapering to a **round point**, and writes as smoothly as a lead-pencil. The **point** and **needle** of the pen are made of **platina**, alloyed with **iridium**—substances of great durability which are not affected by the action of any kind of ink.

They hold sufficient ink to write 10,000 words, and **do not leak or blot.**

As they make a line of **uniform width** at all times they are **unequaled for ruling purposes.**

Pens are furnished in neat paper boxes. Each pen is accompanied with full directions, filler and cleaner.

BEST MANIFOLDING PEN ON THE MARKET.

19,000 Postmasters use this kind of a pen. The Editor of the American Bee Journal uses the "Foster." You should have one also.

How to Get a "Foster" FREE.

Send TWO NEW SUBSCRIBERS to the American Bee Journal for one year, with $2.00; or send $1.90 for the Pen and your own subscription to the American Bee Journal for one year; or, for $1.00 we will mail the pen alone. Address,

GEORGE W. YORK & CO.
144 & 146 Erie St., Chicago, Ill

will die. But they'll die victorious, eh? Hang 'em!

But I say to their credit they did handsomely in putting in a big lot of honey in the brood-chamber, and a hundred pounds in the super, (mine is a double hive, you know). If they'd only had sense enough to stay and enjoy the fruit of their industry, I, too, would have been more contented.

Your punctuated uncle,
Cook Co., Ill. FRANK.

Partridge Pea.

I send a slip of a plant which grows here along hillsides and streams where there is plenty of yellow clay. I notice the bees work on it very hard in the fall. What is it?

FLOYD M. HEFFNER.
Webster Co., Iowa, Sept. 2.

[The enclosed plant is partridge pea, and belongs to the pulse family. Prof. Cook's Manual says it furnishes abundant nectar. The whole pulse family is a rather sweet one. —C. L. WALTON.]

Not a Pound of Honey.

The honey crop is a failure here. It has been a poor crop the past four years, but there is not a pound of honey to take off this fall. It has been too wet and cold since the first of August for the bees to work and store surplus honey.

W. E. MEAD.
Newaygo Co., Mich., Sept. 15.

The Hamilton Co., O., Association.

The Hamilton County Bee-Keepers' Association held their annual meeting in the Grand Hotel, Cincinnati, Ohio, on Monday evening, Sept. 14. A large number of prominent bee-keepers in the county were present, also from adjoining counties in Indiana and Kentucky. The reports of the Secretary and Treasurer for the past year bespoke a flourishing condition of affairs.

Having settled the question of foul brood treatment by adopting the McEvoy method, this society has issued a pamphlet (free to members) containing full instructions as to symptoms and cure.

It was resolved that the society bend its energies during the ensuing year towards the enactment of laws in favor of the bee-keeping industry in the State of Ohio.

The election of officers for the ensuing year was then proceeded with, and the following resulted:

President, Henry Shafer; vice-president, J. C. Frohliger; treasurer, C. H. W. Weber; executive committee, Fred W. Muth, A. E. Painter, E. P. Rogers, E. H. Chidlaw, R. S. Curry, Charles Kuck, Wm. M. Lennan, W. R. Gould, G. Greene, E. H. Vaupel, Mrs. J. C. Frohliger, and Miss Carrie Boehm. Wm. J. Gilliland, of Silverton, was re-elected secretary.

A motion to amend the by-laws to increase the executive committee from six to twelve was carried unanimously.

Bee-keeping being a source of pleasure to the gentler sex, it was resolved, on the urgent appeal of the secretary, to give them representation on the executive committee. Two were elected, whose names appear above.

E. A. Painter, a prominent attorney and bee-keeper, gave an interesting address on organization, after which a hearty vote of thanks was tendered the proprietor and manager of the Grand Hotel, for the accommodation afforded the bee-keepers' association, free of charge, during the past year.

W. J. GILLILAND, Sec.
Hamilton Co., Ohio.

CONVENTION NOTICES.

Wisconsin.—The annual meeting of the North-Eastern Wisconsin Bee-keepers' Association will be held in the Opera Hall, at Mishicot, Manitowoc Co., Wis., on Wednesday, Oct. 7, 1903. Mr. N. E. France, the General Manager of the National Bee-Keepers' Association, will be present and address the meeting. It is expected that this will be the largest and best convention ever held by the bee-keepers of northern Wisconsin. Everyone interested in the production of honey should be present. An interesting program on many material sujects to each and every person interested in bees has been prepared, and such subjects will be discussed by the prominent and experienced bee-keepers, which will be followed by a free discussion by all in attendance who wish to participate. No one can help but profit by attending this convention. COMMITTEE.

Illinois.—The annual meeting of the Northern Illinois Bee-Keepers' Association will be held in the Court House, in Rockford, Ill., Tuesday and Wednesday, Oct. 20 and 21, 1903. A good program is being prepared, and all interested in bees are invited to attend.

Cherry Valley, Ill. B. KENNEDY, Sec.

Utah.—The Utah Bee-Keepers' Association will meet in the City and County Building in Salt Lake City, Oct. 5, commencing at 4:30 o'clock p.m. Among the subjects discussed will be the winter problem and the best method to promote the interest of the State and National Associations. E. S. LOVESY, Pres.

Long Tongues Valuable
South as well as North.

How Moore's strain of Italians roll in the honey down in Texas.

HUTTO, TEX., Nov. 19, 1902.

J. P. MOORE.—Dear Sir:—I wish to write you in regard to queens purchased of you. I could have written sooner, but I wanted to test them thoroughly and see if they had those remarkable qualities of a three-banded Italian bee. I must confess to you I am more surprised every day as I watch them. They simply "roll the honey in." It seems that they get honey where others are idle or trying to rob; and for gentleness of handling, I have never seen the like. Friend E. R. Root was right when he said your bees have the longest tongues; for they get honey where others fail. I will express my thanks for such queens. I am more than pleased. I will stock my out-apiaries next spring with your queens.

Yours truly, HENRY SCHMIDT.

The above is pretty strong evidence that red clover is not the only plant which requires long-tongue bees to secure the greatest quantity of nectar.

Daughters of my 23-100 breeder, the prize-winner, and other choice breeders: Untested, 75 cents each; six, $4 00; dozen, $7.50. Select untested, $1.00 each; six, $5.00; dozen, $9.00. Safe arrival and satisfaction guaranteed. Circular free. I am filling all orders by return mail, and shall probably be able to do so till the close of the season.

J. P. Moore, L. Box 1, Morgan, Ky.
31Atf Pendleton Co.
Please mention Bee Journal when writing

SWEET CLOVER
And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5lb	10lb	25lb	50lb
Sweet Clover (white)....	$ .65	$1.20	$2.75	$5.00
Sweet Clover (yellow)....	.90	1.70	4.00	7.50
Alsike Clover	1.00	1.80	4.25	8.00
White Clover	1.50	2.80	6.50	12.50
Alfalfa Clover	1.00	1.80	4.25	8.00

Prices subject to market changes.

Single pound 5 cents more than the 5-pound rate, and 10 cents extra for postage and sack.

Add 25 cents to your order, for cartage, if wanted by freight, or 10 cents per pound if wanted by mail.

GEORGE W. YORK & CO.
144 & 146 Erie Street, CHICAGO, ILL.

RUBE'S SURPRISE.
Well, I'll Be Bumped!

I don't see what I have been thinking of all summer. Here I could gest as well sent to Griggs Bros. for my Supplies and saved all this freight I've been throwing away and got my goods cheaper, too. Don't see why I didn't send them a trial order sooner and find out what I was doin', long as they sell Root's Goods at their factory prices, gest as they said.

A Word to the Wise is Sufficient.

GRIGGS BROS., - TOLEDO, OHIO.

28 cents Cash paid for Beeswax.

This is a good time to send in your Beeswax. We are paying 28 cents a pound—CASH—for best yellow, upon its receipt, or 30 cents in trade. Impure wax not taken at any price. Address as follows, very plainly,

GEORGE W. YORK & CO., 144 & 146 Erie St., Chicago, Ill.

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BOYS WE WANT WORKERS
Boys, Girls, old and young alike, make money working for us. We furnish capital to start you in business. Send us 10c stamps or silver for full instructions and a line of samples to work with. DRAPER PUBLISHING CO., Chicago, Ill.

"What Happened to Ted"
BY ISABELLE HORTON.

This is a true story of the poor and unfortunate in city life. Miss Horton, the author, is a deaconess whose experiences among the city poverty stricken are both interesting and sad. This particular short story—60 pages, 5x6¾ inches, bound in paper cover—gives somewhat of an insight into a little of the hard lot of the poor. Price, postpaid, only 10 cents (stamps or silver.) Address,

ISABELLE HORTON,
227 EAST OHIO STREET, CHICAGO, ILL.

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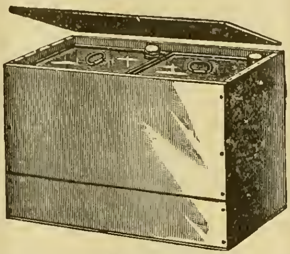
Extracted Honey For Sale

ALL IN 60-POUND TIN CANS.



Alfalfa Honey

This is the famous White Extracted Honey gathered in the great Alfalfa regions of the Central West. It is a splendid honey, and nearly everybody who cares to eat honey at all can't get enough of the Alfalfa extracted.

Basswood Honey

This is the well-known light-colored honey gathered from the rich, nectar-laden basswood blossoms. It has a stronger flavor than Alfalfa, and is preferred by those who like a distinct flavor in their honey.

Write for Quantity Prices by Freight, if Interested.

A sample of either, by mail, 10 cents, to pay for package and postage.

Order the Above Honey and then Sell It.

We would suggest that those bee-keepers who did not produce enough honey for their home demand this year, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere.

GEORGE W. YORK & CO., 144 & 146 E. Erie St., Chicago, Ill.

DITTMER'S FOUNDATION RETAIL AND WHOLESALE

This foundation is made by a process that produces the superior of any. It is the cleanest and purest. It has the brightest color and sweetest odor. It is the most transparent, because it has the thinnest base. It is tough and clear as crystal, and gives more sheets to the pound than any other make.

Working wax into Foundation for Cash a Specialty. Beeswax always wanted at highest price.

Catalog giving FULL LINE OF SUPPLIES with prices and samples, FREE on application.

E. GRAINGER & Co., Toronto, Ont.,
Sole Agents for Canada.

GUS. DITTMER, Augusta, Wis.

BINGHAM'S PATENT Smokers

25 years the best.
Send for Circular.

25Atf T. F. BINGHAM, Farwell, Mich.

BEE-SUPPLIES!

ROOT'S GOODS AT ROOT'S PRICES

Everything used by bee-keepers.
POUDER'S HONEY-JARS. Prompt service. Low Freight Rates.
NEW CATALOG FREE.

WALTER S. POUDER.
512 MASS. AVE. — INDIANAPOLIS, IND.

Italian Queens, Bees and Nuclei.

We have a strain of bees bred specially for honey-gathering and longevity, at the following prices:

One Untested Queen	$ .60
One Tested Queen	.80
One Select Tested Queen	1.00
One Breeder Queen	1.50
One-Comb Nucleus (no Queen)	1.00

These prices are for the remainder of the season.

Queens sent by return mail. Safe arrival guaranteed. For price on Doz. lots send for Catalog.

J. L. STRONG,
16Atf 204 E. Logan St., CLARINDA, IOWA

REMARKABLE The Universal Satisfaction our QUEENS do give...

STERLING, GA., June 29, 1903.

I was showing my father yesterday how my bees, which I bought from you, were out-working everything in my apiary. Send me 4 Buckeye Red Clover and 2 Muth Strain Golden Italians. I will order more after next extracting.
THOS. H. KINCADE.

Buckeye Strain Red Clover Queens. They roll in honey, while the ordinary starve.

Muth Strain Golden Italians—NONE SUPERIOR. ∴ **Carniolans**—NONE BETTER.

Untested, 75c each; 6 for	$ 4.00	Tested, $1.50 each; 6 for	$ 7.25
Select Untested, $1.00 each; 6 for	5.00	Select Tested, $2.50 each; 6 for	12.00

Best money can buy, $3.50 each.

Send for Catalog of **BEE-SUPPLIES**; complete line at manufacturer's prices.

The Fred W. Muth Co.,
Front and Walnut, - CINCINNATI, OHIO.

HONEY AND BEESWAX

MARKET QUOTATIONS

CHICAGO, Sept. 18.—Sales are not frequent enough to keep receipts cleaned up. They are made on a basis of 13@14c for comb of the best grades. Extracted, white, 6½@7c for clover and basswood, and 6@7c for other white honeys; amber, 5½@6½c; according to flavor and package. Beeswax, 30c. R. A. BURNETT & Co.

KANSAS CITY, Aug. 25.—Receipts of comb honey more liberal; demand improving. We quote fancy white comb, 24 section case, $3.25; No. 1, white amber comb, 24-section case, $3 00; No. 2, white amber comb, 24-section case, $2.75; Extracted, white, per lb., 6½c; amber, 5½@6c. Beeswax, 25@30c. C. C. CLEMONS & Co.

ALBANY, N.Y., Sept. 19.—Honey market firm on light receipts so far and good demand. We quote: Fancy white, 16c; No. 1, white, 15c; No. 2, 14c; buckwheat, 13@14c. Extracted, good demand just now for Jewish holidays, for candied honey, at 6@6½c for dark; white clover, 7@7½c; mixed amber, 6½@7c. Beeswax, 30c.
H. R. WRIGHT.

CINCINNATI, Aug. 6—The supply about equals the demand for extracted honey. We are selling amber extracted in barrels from 5½@6½c, according to quality. White clover, barrels and cans, 7@8½c, respectively. Comb honey, fancy, in no drip shipping cases, 16@16½ cents. Beeswax, 30c. THE FRED W. MUTH Co.

NEW YORK, Sept. 8.—New crop comb honey is beginning to arrive more freely, and the demand is good for all grades. We quote fancy white at from 14@15c, No. 1 at 13c, amber at from 11@12c; no buckwheat on the market as yet.

Extracted is plentiful, and in fair demand at 7c for the white, 6@6½c for the light amber, 5@5½c for dark. Southern in barrels at from 55@65c per gallon, according to quality. Beeswax is declining, and nominal at from 28@29c.
HILDRETH & SEGELKEN.

CINCINNATI, Sept. 18.—The extracted honey market has weakened a little as white clover is offered quite plentiful; prices of sales I made ruled as follows: Amber, in barrels, 5@5½c; water-white alfalfa, 6@6½c; fancy white clover, 6½@7½c. Comb honey, fancy water-white, 14@15½c. No sales for lower grades. Beeswax, 28c. C. H. W. WEBER.

SAN FRANCISCO, Sept. 2.—White comb honey, 13@14c; amber, 9@11c. Extracted, white, 5½@6c; light amber, 5@5½c; amber, 4¼@5c; dark amber, 4@4¼c. Beeswax, good to choice, light, 27½@29c; dark, 25@26c.

Most of the comb on market is of small lots, and while being very steadily held, fails to move as readily or to as good advantage as would straight carload lots of uniform and high grade. Extracted is in high request, with offerings of only moderate volume, and market firm at prevailing values.

WANTED! FANCY COMB HONEY

In no-drip shipping-cases. Also Amber Extracted in barrels or cans. Quote your best price delivered Cincinnati. The Fred W. Muth Co.
32Atf Front and Walnut, CINCINNATI, OHIO.

WANTED—Comb Honey in quantity lots. We are perhaps the only dealers in this article owning as much as 150,000 pounds at one time. Please state quantity, quality and price asked for your offerings. Thos. C. Stanley & Son.
24Atf MANZANOLA, COLO., or FAIRFIELD, ILL.

WANTED—Extracted Honey.

Mail sample and state lowest price delivered Cincinnati. Will buy FANCY WHITE COMB HONEY, any quantity, but must be put up in no-drip shipping-cases.

C. H. W. WEBER.
2146-48 Central Ave., CINCINNATI, OHIO.
24Atf Please mention the Bee Journal.

WANTED!

TO BUY—White Clover Comb and Extracted **HONEY**—also Beeswax. Spot cash. Address at once, **C. M. SCOTT & CO.**
33Atf 1004 E. WASH. ST., INDIANAPOLIS, IND.

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The Best Bee-Goods in the World....

are no better than those we make, and the chances are that they are not so good. If you buy of us **you will not be disappointed. We are undersold by no one.** Send for new catalog and price-list and free copy of THE AMERICAN BEE-KEEPER; in its thirteenth year; 50 cents a year; especially for beginners.

—THE—

W. T. Falconer Mfg. Co.,
JAMESTOWN, N. Y.

W. M. GERRISH, Epping, N.H., carries a full line of our goods at catalog prices. Order of him and save the freight.

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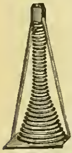
Queen-Clipping Device Free!



The MONETTE Queen-Clipping Device is a fine thing for use in catching and clipping Queens' wings. It is used by many bee-keepers. Full printed directions sent with each one. We mail it for 25 cents; or will send it **FREE** as a premium for sending us One New subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device. Address,

GEORGE W. YORK & CO.,
144 & 146 E. Erie St., - CHICAGO, ILL.

Hives, Sections, Foundation,

etc. We can save you money. Send list of goods wanted and let us quote you prices. ROOT'S GOODS ONLY. Send for Catalog.

M. H. HUNT & SON, Bell Branch, Mich.

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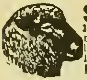

SHEEP MONEY IS GOOD MONEY and easy to make if you work for us. We will start you in business and furnish the capital. Work light and easy. Send 10 cents for full line of samples and particulars.

DRAPER PUBLISHING CO., Chicago, Ills.

Please mention Bee Journal when writing

For Sale 10 to 100 Colonies of Yellow Italian Bees in Dovetail hives. Bees and hives in first-class condition.

JOHN DIVEKFY.
38A4t 346 S. River St., AURORA, ILL.

If you want the Bee-Book

That covers the whole Apicultural Field more completely than any other published, send $1.20 to

Prof. A. J. Cook, Claremont, Cal.,

—FOR HIS—

"Bee-Keeper's Guide."

Liberal Discounts to the Trade.

Catnip Seed Free!

We have some of the seed of that famous honey-producing plant—Catnip. It should be scattered in all waste-places for the bees. Price, postpaid, 15 cents per ounce; or 2 ounces mailed FREE to a regular subscriber for sending us one NEW subscriber to the Bee Journal for one year, with $1.00; or for $1.20 we will send the Bee Journal one year and 2 ounces of Catnip seed to any one.

GEORGE W. YORK & CO.
144 & 146 E. Erie St., - CHICAGO, ILL.

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26th Year **Dadant's Foundation** 26th Year

We guarantee Satisfaction. What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS. PATENT WEED-PROCESS SHEETING.

Why does it sell so well? Because it has always given better satisfaction than any other. Because in 25 years there have not been any complaints, but thousands of compliments.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

Bee-Keepers' Supplies OF ALL KINDS *****

Very fine pure-bred BARRED PLYMOUTH ROCK Chickens and Eggs for sale at very low prices.

Langstroth on the Honey-Bee—Revised,

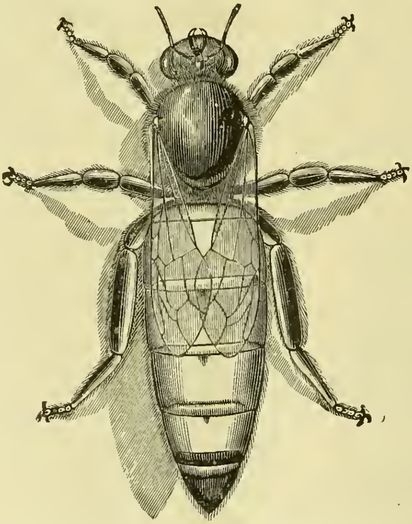
The classic in Bee-Culture—Price, $1.20, by mail.

BEESWAX WANTED at all times.

DADANT & SON,
Hamilton, Hancock Co., Ill

Please mention Bee Journal when writing

RED CLOVER HONEY-QUEENS.



SPRING BLUFF, WIS., July 18, 1903.
THE A. I. ROOT CO., Medina, Ohio.

Dear Sirs:—I thought I would write you a few lines in regard to the Red Clover Queen I got from you. They haven't swarmed yet this summer, but I have taken 48 sections from them and there is 24 more all ready to come off.

Just think, 72 nice sections of as nice honey as ever was made, and only July 18th. It seems as though they will surely fill 48 more.

I don't know whether their tongues are any longer than any of the others, or whether they gathered it from Red Clover, but surely such bees are worth money.

I use the 8-frame Jumbo frame.

C. E. KELLOGG.

C. E. KELLOGG, Spring Bluff, Wis.

Dear Sir:—We have yours of July 18th and would be glad to have you advise us by return mail with reference to the capping of the honey. Some parties say the capping from these bees is not white, and we would be glad to have you advise us how your honey is in this respect, and oblige, Yours truly,

THE A. I. ROOT CO.

SPRING BLUFF, WIS., July 31, 1903.
THE A. I. ROOT CO., Medina, Ohio.

Dear Sirs:—Yours of July 24th at hand to-day. In regard to your question in reference to the cappings of the honey from these bees I will say that it is simply perfect, beautiful snow-white and every box perfect. 96 one-pound sections now. I am quite sure they will fill two more supers, which will bring the number up to 144. I would like very much to have you see a few of those sections, and I will be glad to send you a few

Now, I haven't told you ALL their good qualities yet. I am sure they are by far the most gentle bees to handle I have. I could take off the sections without smoke or veil without getting stung.

There are a few traits about them that seem to me are quite remarkable aside from their honey-gathering; they don't seem to want to swarm.

I will write you again in a few weeks and let you know if they fill the 144 sections, which I am sure they will. Respectfully,

C. E. KELLOGG.

AGAIN READY FOR PROMPT DELIVERY.

We were snowed under with orders for a few weeks, but here we are agai with good Queens and prompt service.

Red Clover and Honey Queens.

	Each.	Six.
Untested	$1.00	$ 5.70
Tested	2.00	11.40
Select Tested	3.00	17.10

Breeding	$5.00
Select Breeding	7.50
Extra Select Breeding	10.00

With any of the last three we include one frame of bees and brood to insure safe arrival, for which we make no charge. These must be sent by express. Queen circular free.„

THE A. I. ROOT CO., Medina, Ohio.

AMERICAN
BEE JOURNAL

43d Year. CHICAGO, ILL., OCT. 8, 1903. No. 41.

WEEKLY

S. WOOD, (Aged 82 years,)
Member of the Ontario Bee-Keepers' Association.

THE AMERICAN BEE JOURNAL

PUBLISHED WEEKLY BY

GEORGE W. YORK & COMPANY

144 & 146 E. Erie St., Chicago, Ill.

Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

EDITOR,
GEORGE W. YORK.

DEPT. EDITORS,
Dr. C. C. Miller, E. E. Hasty, Emma M. Wilson

IMPORTANT NOTICES.

The Subscription Price of this Journal is $1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

The Wrapper-Label Date of this paper indicates the end of the month to which your subscription is paid. For instance, "dec03" on your label shows that it is paid to the end of December, 1903.

Subscription Receipts.—We do not send a receipt for money sent us to pay subscription, but change the date on your wrapper-label, which shows you that the money has been received and credited.

Advertising Rates will be given upon application.

National Bee-Keepers' Association

Objects of the Association:

1st.—To promote the interests of its members.
2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

ANNUAL MEMBERSHIP, $1.00.
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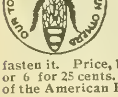
A Celluloid Queen-Button is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-lapel. It often serves to introduce the subject of honey, and frequently leads to a sale.



The picture shown herewith is a reproduction of a motto queen-button that we are furnishing to bee-keepers. It has a pin on the underside to fasten it. Price, by mail, 6 cents; two for 10c; or 6 for 25 cents. Send all orders to the office of the American Bee Journal.

Dr. Miller's New Book

SENT BY RETURN MAIL.

The book contains 328 pages, is bound in handsome cloth, with gold letters and design; it is printed on best book-paper, and illustrated with over 100 beautiful original half-tone pictures, taken by Dr. Miller himself. It is unique in this regard.

The first few pages of the new book are devoted to an interesting biographical sketch of Dr. Miller, telling how he happened to get into bee-keeping. Seventeen years ago he wrote a small book, called "A Year Among the Bees," but that little work has been out of print for a number of years. While some of the matter used in the former book is found in the new one, it all reads like a good new story of successful bee-keeping by one of the masters, and shows in minutest detail just how Dr. Miller does things with bees.

HOW TO GET A COPY OF DR. MILLER'S "FORTY YEARS AMONG THE BEES."

The price of this new book is $1.00, post-paid; or, if taken with the WEEKLY **American Bee Journal** for one year, BOTH will be sent for $1.75.

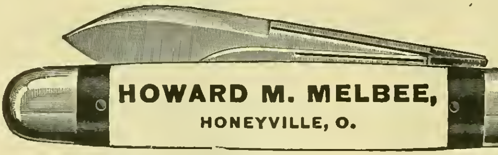
Or, any present regular subscriber to the American Bee Journal whose subscription is paid in advance, can have a copy of Dr. Miller's new book *free as a premium* for sending us **Two New Subscribers** to the Bee Journal for one year with $2.00. This is a magnificent offer, and should be taken advantage of at once. For many of our readers it is not only an easy way to earn a copy of the book, but at the same time they will be helping to extend the subscription list of the old American Bee Journal, and thus aiding also in spreading the best kind of apicultural information among those who would be successful bee-keepers.

Address all orders to

GEORGE W. YORK & CO.,
144 & 146 E. Erie Street, CHICAGO, ILL.

The Novelty Pocket-Knife.

Your Name and Address on one side—Three Bees on the other side.



[This Cut is the Full Size of the Knife.]

Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the subscriber, and on the other side pictures of a Queen, Drone, and Worker, as shown here.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a last-time, with proper usage.

Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the "Novelty" is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the "Novelties," your Pocket-Knife will serve as an identifier; and in case of death, your relatives will at once be notified of the accident.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid for $1.25, or give it as a Premium to the one sending us THREE NEW SUBSCRIBERS to the Bee Journal (with $3.00.) We will club the Novelty Knife and the Bee Journal for one year, both for $1.90.

GEORGE W. YORK & CO. Chicago, Ill

☞ Please allow about two weeks for your knife order to be filled.

Please Mention the Bee Journal when writing Advertisers.....

AMERICAN
ESTABLISHT IN 1861
THE OLDEST BEE-PAPER IN AMERICA
BEE JOURNAL

43d YEAR. CHICAGO, ILL., OCT. 8, 1903. No. 41.

Editorial Comments

Scourene removes propolis from the hands almost instantly, says Ralph D. Cleveland. We suppose all grocers have scourene for sale.

Honey Crop Ruined by Insects.—A Utah correspondent reports in the Rocky Mountain Bee Journal that "those little insects are in the alfalfa by the millions, and are in some of the bee-hives eating up the honey," resulting in only a fourth of a crop.

Honey and Wax in France.—Government reports show that in the ten years ending with 1901 the value of wax produced was nearly half as much as that of honey, or 44 percent. That looks like a large proportion of wax; but then the yleld of honey was less than 11 pounds per colony.

A Middle Bar in Place of Wiring, is advised by the editor of the Australian Bee-Bulletin. He says:

> We, ourselves, have not used wired foundation for several years, both on account of its stretching when the frame is full of comb and honey, and because the horizontal stick across the center of the frame is much better, and less trouble to put in. We know a number of good bee-keepers who are adopting the stick-plan instead of wires.

Choice of Location.—On page 579, an editorial ends with saying, "On the whole......the probability is that not one bee-keeper in ten will find himself better off anywhere in the world than right where he is now." This view is neatly confirmed by the first item in the editorial columns of the September Bee-Keepers' Review, where Editor Hutchinson says: "Michigan seems doubly desirable as a home, since taking my Western trip."

Bees Embalming Mice.—The question has been raised whether there is any truth in the statement that when some offending body as large as a dead mouse is found in a hive the bees seal it hermetically with propolis. Perhaps in the majority of cases, when a mouse dies in a hive, it will be found dried to a mummy, with no offensive smell, but with no coating of propolis. At least two cases, however, are reported in Gleanings in Bee-Culture, in which the dead mouse was entirely encased in bee-glue.

A Variation of the Stanley Cartridge, or queen-nursery, is given in Gleanings in Bee-Culture, as used by the A. I. Root Co. Instead of queen-excluding zinc being used, the perforations are smaller, so that workers can not get through. Instead of gun-wads, cylindrical wooden plugs are used. Through the upper one of these plugs a nail-point projects, the cartridge being fastened to the cell-bar by means of this cell-point. Through the lower plug a hole is bored and a smaller plug inserted. This smaller plug is hollowed to contain candy.

Some use leather instead of gun-wads for plugs, and claim they are better.

Co-operative Advertising.—In the discussions as to the advantages of organization among bee-keepers, very little has been said about the matter of calling the attention of the public to the great desirability of making honey a leading article of diet. Yet the gain possible in that direction is not one of the least to be expected from proper united action. Morley Pettit, in the Farmers' Advocate, uses these sensible words on the subject:

> A matter which is at present sadly neglected is the advertising of honey. The very heavens resound with the names of food fads and medicines, while the most pleasant and nutritious of natural sweets is comparatively unknown in our Canadian homes. The reason is not far to seek. "Honey is honey," and, under existing conditions, if Smith advertised he would be increasing the sale of Brown's honey almost as much as his own. The only way out of it is for Smith, Brown, *et al*, to form a honey exchange and advertise the honey of the exchange. They would then agree upon a remunerative price, which would not become exorbitant, by the way, on account of the direct competition of fruit, syrups, and foreign honey. They would advertise extensively until "honey" would become a household word, learned along with "papa" and "mamma" by the lisping child.

"C. O. D. by Mail" is a somewhat novel thing mentioned by H. H. Charles, in Class Advertising. More than a thousand transactions of that kind were made by him with great satisfaction. A customer would want some part of an incubator and order it, perhaps without knowing the cost. If sent by express it would cost 25 cents, if by mail perhaps 3 or 4 cents. It was sent by mail with instructions to the postmaster to collect on delivery and remit, deducting his fee, which was never more than 10 cents. This might not be a bad plan with small orders in bee-supplies. But we wouldn't like to advise it until it is approved by the post-office department of our government.

Commercial Organization is up for discussion nowadays, and it is well that it should be carefully viewed from all sides. Not only should the advantages be shown, but the difficulties and objections as well. Some of these latter are considered by Hon. R. L. Taylor in the Bee-Keepers' Review. He shows the difficulty of making local organizations with the hope of uniting these into State organizations, and later uniting the State organizations into a single National organization. And yet, in the end, that is the very thing he advises, his views being summed up in the caption, "Commercial Organization Must Begin Locally." The only difference that appears between what is so hard to be done and what ought to be done is that action should only be taken in such localities as feel the need of it. He says:

> "When several bee-keepers in the State of Michigan, or in any section of it, think they can dispose of their crop to better advantage by union, let them unite in such manner as seems best suited to their circumstances. If they are successful, their successes and mistakes will be a source of sound instruction to those of other communities who shall desire to take like action. Thus, each organization will be firmly cemented by a natural growth through experience, and, if need appear, its roots and branches will reach out until they meet and intertwine with those surrounding it, and all shall become one great growth, furnishing shade to all of the whole land who seek its shelter."

But if each organization is to intertwine with those surrounding it, will there not be necessity for some one to take the initiative to direct the intertwining? And if all are to become one great growth, who or what is to bring about the merging?

Probably the majority who urge unity of action advise the reverse course, begining at the center and working outward, and they will be likely to ask why it may not be better to form the main organization at the start to foster the local growths, rather than to wait the years necessary for natual growth to blend all into one.

Miscellaneous Items

In Los Angeles and on Catalina.—During the first day of the convention, Prof. Cook planned a trolley-car ride down to Long Beach, on the Pacific's sandy shore, about 30 miles from Los Angeles. It was found that if 100 could be pledged to go, the rate would be only 30 cents for the round-trip instead of 50 cents. The required number was easily secured, and so early Thursday morning all gathered at a certain point, and boarded the cars for Long Beach.

Electric cars get up some speed here in Chicago, but at times these Long Beach cars seemed almost to fly. Along the line was some of the best farming country we had seen in the West. There was one or two dense eucalyptus woods, alfalfa fields, one apiary, and other objects of interests.

Long Beach was soon reached, and we had about an hour to stay. Some of our crowd went in bathing in the Pacific, as well as in the large natatorium, where the water in a tank about 40x80 feet is kept at a certain temperature. The tank was about 4 feet deep at one end, and gradually became deeper toward the opposite end, where it was probably 7 feet deep.

Among those who "took their morning bath" in the tank, were: Prof. Cook, Messrs. Hyde, Hutchinson, Hershiser, Harris, Moe, Ivy (and Mrs. Ivy and child), and a number of others that now we can not recall. It was great sport. One would think that when such 200-pounders as Hershiser tumbled in there woud be an overflow, and everything would be flooded, but evidently ample provision had been made for such emergency, so no one of the spectators at the edge of the "bath-tub" were drowned!

Mr. France went out on the pier, and with a fisherman's line that he borrowed, dropped a small empty bottle down to get a sample of the salty Pacific. He said he had a sample of Atlantic water, and now wanted some of the Pacific to take home.

The time to return to Los Angeles and the convention soon arrived, and all were rushed back in a very short time. It was a pleasant and refreshing trip.

MR. JULIAN AND HIS GLASS-BOTTOM BOAT "IOWA."

At the close of the Wednesday afternoon session, Mr. L. E. Mercer, who had bought a $1200 automobile with some of his honey crop, took Prof. Cook, Mr. Benton and us for a spin around Los Angeles. It was our first experience with that kind of a "horse and buggy." Mr. Mercer had had it about a month, and seemed to know how to manage it perfectly. He took us out on some of the finest streets, around parks, and where we could see the best parts of the city—where beautiful palms, waving pepper-trees, and the tall eucalyptus adorned the sides of the streets. It was a delightful ride, for which we were indebted to one of California's biggest bee-keepers.

The convention closed on Thursday afternoon. During the sessions a trip to Catalina Island was planned. So about a dozen started Friday morning at 8 o'clock for East San Pedro, about 20 miles away, to take the boat to cross the 28 miles of the Pacific to the Island. It was a bright morning, and promised to be a lovely day. But it is needless to say that, from May to November, they said no other kind of days happen there. We oten found ourselves saying in the morning, "Well, we're going to have a bright day to-day," when we thought, "Why, you tenderfoot, they don't have any other kind out here, day after day!" So it was bright, glaring sunshine all the time. Rather hard on Eastern eyes.

We all finally got aboard the boat for Catalina—the famous outing place of Southern California. The boat hadn't gone far before some of the passengers seemed to feel as if they had had too much breakfast. So they began to "unload," and thus help the fish out with "a bite to eat." Dr. Miller concluded he'd better go into the cabin and sit down, and meditate on what he "didn't know." Mr. Hyde couldn't find a vacant seat or chair, or any place to hide, so he sprawled out on the carpeted floor, and tried to "enjoy" himself. He was a perfect picture of homesickness, lonesomeness, seasickness, and general goneness and despair. He wasn't a bit sociable, and that is an unusual condition for him.

We really enjoyed the ride all the way, our stomach keeping right side up and in good shape all the time.

It took about two hours and a half to cross over to Avalon, the only town on the Island of Catalina. It is situated on a beautiful, small bay, on the east shore. There seemed to be but very little shore to the Island, but mostly steep rocks. Avalon is built in a little cozy depression almost under the high hills. At first one wonders how it is possible to get out of the town except by water, but there are stage roads through various parts of the Island. There is also a ranch somewhere on it. A certain portion is set aside as a hunting park, where may be found wild mountain sheep and other animals. Sportsmen may "sport" there by paying for the privilege. We regretted not being able to stay longer and see more of Catalina.

Right here we wish to mention one of the most cordial and kindly bee-keepers we met in California. His name is Wm. Ross. He went to California some 13 years ago, from Ontario, Canada, on account of his health, which he has almost wholly regained in that "Land of *the Climate*," as we feel like calling it.

Well, Mr. Ross has a tent-cottage on Catalina Island, where he and Mrs. Ross and their youngest daughter, Bessie, spend a few weeks every summer.

We (with Mrs. York) at once engaged a room at one of the hotels, and then went out on one of the larger glass-bottom boats. There is a smaller row-boat (shown herewith) which also has a glass bottom. In this latter we took a ride on Saturday morning. It belongs to a man named "Julian," who has been there for about 40 years, and knows just the best route to row people so as to see through the glass bottom the greatest variety of shells, fishes, seaweed, etc. It is truly wonderful how much of interest can be seen through that window at the bottom of the boat. Why, one can see down from 50 to 100 feet, as the water is so clear. Never go to Avalon without taking a ride or two on the glass-bottom boat.

After the trip in the larger glass-bottom boat, Friday afternoon, on which trip Mr. Ross and Bessie also went, he invited us to come to their tent-home for tea, which should consist of some bread, milk, and California's best honey. It was a rare treat. "Mother" Ross just took us wanderers right in, and made us feel right at home. And such a meal! Well, the bread and honey and milk disappeared wonderfully fast, we can assure you. Such appetites as we did have at Catalina! It seemed that everything tasted so good.

During the evening there was a fine band concert for the summer resorters of the village, but we were tired, so sought our room and tried to "sleep the sleep of the just."

The next morning, we hired a row-boat, and with Mrs. York and Mr. Ross tried to do a little fishing in Old Pacific. We thought to catch a 30 or 40 pound yellowtail, or even a leaping tuna wouldn't have been despised! But we didn't get a bite!

About 11 a.m. we went to the bath-house and rented a suitable costume, then got into the Pacific with the rest of the bathers. Miss Bessie had a white cotton flannel suit in which she made a pretty picture. And she could swim in fine style, being quite at home in the water.

At 3:40 we were to take the boat for East San Pedro again, and then the train to Los Angeles, and after that the electric car for Pasadena, where we were to stop over Sunday. We arrived at our destination about 9:30 p m.. two very tired travelers. Oh, how glad we were to get to rest.

On the return voyage on the Pacific, Mrs. York seemed to get wobbly on the boat, as it was a rather choppy sea. After giving up some of her dinner, she felt a little better. The ride on the water did not affect us unfavorably at all. Too tough and hardened, we suppose.

Before leaving lovely Avalon and Catalina, we wish to quote a little from a descriptive circular of the Island, which tells it so much better than we can. Here it is:

Santa Catalina Island.—"A land where Winter hath fair Summer wed," a bit of world by itself, picturesquely located in the Pacific Ocean, 30 miles from Los Angeles.

Santa Catalina is truly a "Garden of the Gods in the land of the free." The island contains 47,000 acres of plains and valleys, and abounds in beautiful and lofty mountains, stupendous rock cliffs and precipices, and in climate, natural beauties and opportunities for outdoor pleasure comes as near perfection as one can find.

The Marine Gardens.—The Ocean, along the entire coast of Catalina Island, is a wonderful natural aquarium. The water is still, tropically rich, and clear as a diamond; hence the famous glass-bottom boat, down through which visitors peer at the wonders of the deep, provide an entertainment found nowhere else in the world. Here one sees a perfect forest of seaweed, in all the colors of the rainbow, in the branches of which float beautiful fishes of rare and radiant tints, being the home of gold perch and schools of emerald fishes, while the black, long-spined echinus, star-fishes, sea cucumbers, abalones and octopi are seen clinging to the bottom of the ocean, and in the intervening water scores of rich jelly fishes of every form and shape captivate the eye. Nowhere so near a city of 100,000 inhabitants can such a strange and fascinating panorama be witnessed as that to be had from the window of the Santa Catalina glass-bottom boats.

Bathing.—The boating and fishing is superior to that of many California resorts. The perfect climate and sanitation, the smooth bays and facilities for safe boating and bathing, render it the ideal place for ladies and children. The little bays are crowded with fishing boats, steam launches and yachts, all providing for the public pleasure.

Fishing.—Fishing is a sport that can be better enjoyed here than any place in the world. Here may be caught finny monsters that weigh from one to 500 pounds, while yellowtail, barracuda, rock bass and albicore afford the fisherman all the sport he can ask for. The famous leaping tuna is caught nowhere else with rod and reel.

A novel sport confined to Catalina is flying fish shooting. The big tunas rush in, driving the flying fishes out of the water in flocks, like quail, and at this time the sportsman on a launch can pick them off with a shot-gun.

Climate.—Catalina is a natural sanitarium, combining all that is best in the Maderia Islands and the famous Riviera. Even in mid-winter the days are mild, frost being unknown; the Island is then a flower-garden. It has valuable sulphur springs, and the opportunities for salt baths and enjoying the remarkable varieties of climate, make it an ideal resort.

The days are never uncomfortably warm in summer, nor too cold in winter, presenting conditions which challenge comparison. The average temperature of July days at Avalon is 65 degrees. In August the highest mean temperature observed at 6 in the morning was 72 degrees.

We liked Avalon so much that we want to return some time when we can remain there a week or two. It is an ideal place to rest. The climate is simply perfect. There is just enough going on there to keep one from getting too stagnant and out of touch with the world. There is a daily paper published on the Island called "The Wireless." It is a great place to purchase curiosities and mementoes to carry home.

If you ever go to Los Angeles, don't fail to cross over to Catalina Island, and stay there a few days. You will never regret it. And if you can find Mr. and Mrs. Ross, and Bessie, you will have a much better time there than you can possibly have otherwise.

Next week we will tell how we and some of the other convention members spent Sunday in California.

Out of the Bee-Supply Business.—Again we find ourselves entirely out of the bee-supply business; and also the honey-business. The transfer was made to The A. I. Root Co., on Oct. 1, 1903. (See their ad.) For several years we have felt that wehad entirely too many responsibilities, with publishing the American Bee Journal, looking after a bee-supply business, and handling a large retail and wholesale honey-trade. It was either drop some things or live a shorter time. We preferred to do the former, and have acted accordingly. It is, of course, with much regret that it seemed necessary for us to make this decision.

We hope now to have more time to devote to the American Bee Journal, with which we have been connected either as employee or editor for almost 20 years. We have always been in love with it, and trust that with the continued help of its host of loyal readers and contributors we may in the future be able to make it a greater power for the advancement of the industry which it represents than it ever has been in all its past nearly 43 years. George W. York & Co.

Convention Proceedings

THE LOS ANGELES CONVENTION.

Report of the Proceedings of the 34th Annual Meeting of the National Bee-Keepers' Association, Held at Los Angeles, Calif., Aug. 18, 19 and 20, 1903.

(Continued from page 631.)

WEDNESDAY AFTERNOON SESSION.

After calling to order, J. F. McIntyre, of California, read a paper on

HOW TO MAKE MONEY PRODUCING EXTRACTED HONEY.

To make money producing extracted honey it is necessary—

First, to produce a large quantity of high-grade honey; and

Secondly, to sell it for a good price.

In starting out to accomplish these objects the first thing to be considered is the location, or locations, as it will be necessary to keep more than one apiary if you make very much money. If you can find a good field where you can keep a number of apiaries around your home apiary without overstocking or crowding out other bee-keepers, you are fortunate. I shall not attempt to tell you where to find this "Eldorado," because every field has some drawbacks, and you might not thank me when you find them out. I will, however, name some of the things to be taken into consideration in selecting a field.

The quantity and quality of the honey that can be produced, an open field, cost of transportation to market, society, healthfulness of climate, annoying insects, excessive heat in summer, or cold in winter.

Having found your "Eldorado," it is important to start with a hive that you will not regret. I have found nothing better than the 10-frame Langstroth, with an unbound zinc queen-excluder between the super and brood-chamber, and a painted duck-cloth under the cover. All combs in the brood-chamber should be built from full sheets of foundation.

It is also important to stock your hives with the very best stock of bees to be found in the world. I can only recommend that you buy some queens from every breeder who claims to have superior stock, and breed from that which is best.

A system of management should be adopted that will prevent excessive increase, and keep both the super and brood-chamber full of bees during the honey-flow.

Honey should not be extracted until it is ripe, otherwise it must be evaporated to prevent loss from fermentation. It requires experience to tell when honey is ripe enough to extract. In some seasons, and in damp locations, the nectar from the flowers is very thin, and the honey will often ferment after it is all sealed over; at other times, and in dry locations, it is sometimes thick enough to keep, when the bees commence to seal it over. In most locations it is about right when half sealed.

It is economy to have the best tools to work with. At my Sespe apiary, this season, my daughter Flora, 19 years old, extracted all the honey, 10 tons, as fast as a man could cart it in; but she had an 8-comb extractor driven by water-power to do it with. At an out-apiary it cost me $3.00 per day to get the same amount of honey extracted with a 6-comb Cowan extractor. Two good honey-carts, carrying 4 supers, or 32 combs of honey, at a load, are necessary to bring the honey in from the apiary, one cart being loaded in the apiary while the other is extracted in the honey-house.

The capping-box should be large enough to hold all the cappings from one extracting, to give time for the cappings to drain dry before the apiary is ready to extract again. Bingham honey-knives, kept clean in cold water, are the best to uncap the honey until we get a power-driven machine that will uncap both sides at one operation.

I use smokers with a 4-inch fire-tube.

Plenty of tank-room is necessary to give the honey time to settle and become clear and sparkling before it is put into cans or barrels, and to prevent delay in extracting, by having to wait for cans or barrels to put the honey in.

Having a field and apiaries, with machinery to run them, and a good system of management, we will now consider the marketing of the crop.

If the cost of producing a pound of honey is 4 cents, it is easy to see that the man who is obliged to sell all of his honey at 4 cents will soon conclude that bees don't pay, and get out of the business. To make money, he must be able to hold his honey until the market price rises, for every cent he makes is in the difference between the cost of production and the price at which he sells. Organization undoubtedly helps to hold up prices. The organization of the California National Honey-Producers' Association, together with a medium crop instead of a full crop, as was expected early in the season, has kept the honey market from going to pieces in California this year; but organized weakness is not strength—it is only a bluff. The Steel Trust has been considered a pretty strong organization, and yet it has not been able to prevent a depreciation of its stock to the extent of over $300,000,000 in the last few months. Why has this thing happened? Too many of its members had to have money, and steel stock had to be sacrificed to get it.

When the holders of any stock or commodity are financially weak, the price of that stock or commodity is bound to fall; but when they are all strong the price is equally sure to rise.

When a large crop of honey is harvested the bee-keepers, or a large majority of them, are financially weak, and while they are making sacrifices of their honey to get money the price is bound to rule low; but their honey, when sold, goes into the hands of strong men, and soon the price begins to rise. If you have money to live on, and no debts to pay, just wait until it gets to the highest price, then sell.

J. F. McIntyre.

Mr. York, in the absence of the writer, then read the following

RESPONSE BY E. S. LOVESY.

I fully agree with Mr. McIntyre in every point he advocates except queen-excluders. I can get more honey by giving the queen free range, as I run entirely on the division plan, giving the bees plenty of room; and if the queen should get into the surplus boxes, I can make good use of the brood, making new colonies or building up. I believe in building up strong colonies before I divide, as the results are often disastrous to divide and attempt to build up afterward.

I believe with Mr. McIntyre in the careful selection of a location, 10 frame hive, a liberal use of foundation or drawn comb, a good system of management that will keep the hive full of bees; and all honey should be properly extracted and ripened. If these conditions are complied with, as a rule it can be held for the highest possible price.

I also agree with Mr. McIntyre that the bee-keepers are in need of a stronger organization. We should not forget that "in union is strength;" a lack of which may cause our energy, at least, to be partly lost.

I regret that conditions are such that I can not be at the convention.

E. S. Lovesy.

L. L. Andrews—I would like to ask Mr. McIntyre what he thinks of the use of the hot knife as compared with the cold knife in extracting?

Mr. McIntyre—I am sorry to say that while I have seen it done I have never uncapped any honey in my life with a hot knife, but after putting the cold knife into the hands of others, and showing them how to use it, they would never use the hot knife again.

George M. Wood—I would like to ask Mr. McIntyre to explain his method of using the cold knife?

Mr. McIntyre—I have a little wooden keg usually, because it does not dull the knife when you throw it in. Three knives are about all you can handle. We take a knife out of the water all soaked, clean and sharp, run it to one side and the capping drops off, then up the other side of the comb. You can use it on several combs that way. Whenever a knife gets dirty—the least bit of wax on it—it goes right in to soak off, and when it comes out it is wet, clean, and free from honey, and, being sharp, it runs up the comb and cuts it right off, sleek as a razor would do it, and does it much quicker than a hot knife.

Mr. Wood—Do you use a long knife?

Mr. McIntyre—I would not use anything but a Bingham knife.

Mrs. D. A. Higgins—I would like to ask Mr. McIntyre whether he can uncap well-cured white or black sage honey with a cold knife?

Mr. McIntyre—We do not uncap any other kind—very little of any other kind. This is the honey (sample produced). You can turn it up for some time on a cold day before it will come out. It seems very queer that any one should run up against any difficulties. The hot knife, according to the way I have seen it used, will run half way up a comb or so, as far as it will go; but our cold knife will uncap several combs.

Mrs. Higgins—I find it will uncap one comb; that is all.

Mr. McIntyre—I always cut from the bottom up, because the comb is leaning a little that way, and as we run the knife up it drops right clean.

Frank Benton—Since Mr. McIntyre has had a great deal of experience in producing extracted honey on a large scale, I would like an expression from him as to how the different races of bees compared. He is not restricted in extracted honey to the kinds of bees that will produce white combs, since, of course, capping comes away anyway, and the honey from one is as good as the other.

Mr. McIntyre—I commenced bee-keeping in California with some stock I bought from Dr. Gallup. I brought his apiary here, and we had some very nice imported Italians. Later I got some Cyprian stock. I crossed these, and for extracted honey I find that I can get more honey with some Cyprian blood than with the Italians alone. They have really proved to be the strongest honey-gatherers I have had. I do not like the stinging qualities of the pure Cyprian. I have crossed them somewhat with Italian-hybrids. If I had crossed them with the Carniolans, which, I believe, is the favorite cross, they would be pure hybrids. These Italians crossed with Cyprians have proved to be the best bees in my hands.

J. F. Flory—Are they not crosser than the Italians?

Mr. McIntyre—Yes; I think you can not add Cyprian blood without adding a little temper. I think probably there is a little Cyprian blood in the queens. Those are selected from may be 10 to 20 generations bred in my own apiary, and I can not tell whether there is Cyprian blood in a queen, but I pick her for her business qualities. I would not take a queen that would sting me all to pieces; I would not breed from such a queen. I want them to be easy to handle, nice in color, and I want them to be great honey-gatherers. Those three points are about all I look to. I can not ask a queen whether she has any Cyprian blood in her or not, if she is easy to handle.

Geo. L. Emerson—I have not much to say, but I was interested in this cold-knife proposition, and thought perhaps we might get a little more information. Mr. McIntyre is a very large honey-producer. We have never been able to use a cold knife with any degree of satisfaction whatever. We seem to have a diversity of opinion here. There may be some that think they will have to change and use a cold knife instead of a hot knife. If they are going to do that they ought to know how to do it. If there is any way Mr. McIntyre can show me how to get away with that gasoline stove, I would like to have him do so; but we must have the same quality of work, even if we are a little warmer in doing it. I believe that is all.

T. O. Andrews—I was going to say if there was crossed blood in those queens Mr. McIntyre sent me, they are the most uniform I ever got together. So I thought they were pure Italians.

H. H. Hyde—I would like to know if Mr. McIntyre has ever used shallow frames for extracted honey, 5⅜ inches deep.

Mr. McIntyre—No, I have had some frames 7x17. They would do very nicely to extract from, but they did not suit me for brood-chambers, so I have only the 10-frame Langstroth. We usually manage to get them down near the super, which is so much heavier; get the combs out and extract them about from eight to ten days, according to the way the honey flows.

Mr. Hyde—We have used both shallow and Ideal supers, and we have concluded we can handle more conveniently, and quicker, by using the Ideal super for extracted honey; and, in extracting, we have a large extractor that takes two of the frames in each basket. When we come to uncap we can uncap one side, and do not go over it twice. But the principle is in not using the Porter escape at all. One man simply takes hold of the super, the first man smokes it freely. One man gives it a wobble. In a few minutes we take it in the house, and then can take off the super about as quick as one frame, and we consider it quite a gain also in uncapping.

Charles C. Schubert—I would like to ask whether Mr. McIntyre uses a bee-escape? also, whether he has an entrance to the super above the queen-excluder?

Mr McIntyre—No, to both questions. I bought 50 Porter escapes and tried them to that extent, and the bees did not get out quick enough to suit me, so we went after them with wet brushes. We use a smoker and a wet brush—a brush made from manilla rope. I take a brush about five inches long. That does not hurt the bees any, and empties the supers quickly. I have tried different sized brood-chambers. I thought the 10-frame Langstroth was not big enough and tried 60 frames once, but when the colony swarms the swarm puts in too much time filling up the brood-chamber.

John F. Crowder—I would like to ask Mr. McIntyre where the apiaries are not diseased do you put the same combs back?

Mr. McIntyre—I always change combs. We take the empty ones and put on top of the hive. These empty ones are from some other hive.

A. Arthur Hansen—I would like to ask Mr. McIntyre how that cross is in regard to swarming—the cross between the Italian and Cyprian?

Mr. McIntyre—Well, I have some years thought I had a pretty fine non-swarming lot of bees. They swarmed hardly any, but filled up their hives in grand shape. Then, in other years, when we have had lots of honey coming in, the apiary would just go wild, and nearly every colony would swarm. I think they are not as bad as pure bees. I can rear bees that never swarm, but they are very poor.

Mrs. J. B. Cherry—My experience with bees showed me for two seasons that our poorest hybrid black bees store more surplus honey. How do you account for this?

Mr. McIntyre—I have seen hybrid colonies that would probably excel other colonies in the apiary—may be any other colony in the apiary—and I suppose every bee-keeper has seen the same thing. But I never made a practice of breeding from that hybrid colony, for the simple reason that if one should send out such queens as that over the United States, they would soon get a bad reputation. If everybody were writing back, "The queens you sent me were hybrids," it would hardly do. I do not deny but what the black blood in some colonies seems to have no detrimental effect, and yet, in other colonies—I have seen, may be, 20 cases where hybrids were very poor compared with the strain of bees I have.

Mr. Andrews—I want to say in reference to that knife proposition, that I first got the idea of the cold knife from Mr. Wilder. I found by keeping the knife very sharp, and then cutting toward the top wall, I could always uncap two combs with the hot knife while I was uncapping one with the cold knife; so I went back to the hot.

A Member—I would like to ask if you raise the combs from underneath the queen-excluder, and place other empty combs and foundation below to give the queen more room? I find they swarm a great deal unless I do that, and that makes lots more work.

Mr. McIntyre—No, not as a rule. My practice is to leave the super full of honey on the hives in the fall, if possible, and in the spring these colonies will breed up lively without any assistance from me. I go over to see the queen, clip her wing, and they get very little more attention until somewhere along about the first of April. They will swarm, a good many of them, having the queen-excluder on. I catch the queen, set the hive back, and put the brood-chamber, filled up with comb foundation, in the place where the old one stood, and let the swarm go back. Then I have every queen in the brood-chamber. That is the main reason why I use queen-excluders. They hinder the brood some in going back into the supers, but I don't have second swarms. If I have some queen-cells ready to hatch I put one right in. The queen hatches and finds there are not enough bees to keep the brood warm, she tears the cells all down. A little later in the season, when I get my apiary full that way, I take the next lot, brush all the bees off of these brood-combs, and put one set of them with each one of these. I don't put it all on, mind you, because once in awhile I find these have supers full of honey. Then I take the honey and put it above, and put the brood below. In that way every one of my colonies stores several supers full of honey every season. I do not have a lot of little, weak swarms where the bees do not get into the supers.

Mr. Gilstrap—I have worked with bees in Central California, Southern California, and in Colorado, and I find location and quality of honey produced has a great deal to do with the use of the hot or cold knife. Lacking 15 cans we took off 9 tons of honey last year, and never used anything but a cold knife. I find keeping the knife sharp has a great deal to do with it. There are only two locations where I have worked with bees where I have found the hot knife necessary. Where the honey is not very stiff the cold knife can be used very satisfactorily.

J. A. Delano—My experience with the hot knife and cold has been during the last 15 years I have been in the bee-business. I started in with the idea that the cold knife was a good plan. It saves a fire in the honey-house, the heat, and bother. Another reason I thought it a good plan, was because several of the large bee-keepers were using the same plan. Mr. Charles Graham, one of the largest bee-keepers, used that plan himself, keeping the knife sharp, and running it on the same plan as Mr. McIntyre. But I found, after I had used it for about five years, that if we had boiling water to put our knives in, and kept them sharp, we could accomplish probably twice as much, and do the work a good deal easier. In this State we have different kinds of honey in different localities. With sage honey your can use a cold knife very well, as there is dust you have to wash off with a cloth; but I find in general practice the hot knife takes the lead in my experience. Mr. Graham has also done away with the cold knife, and taken up with the hot-water process. In extracting from an apiary where the honey-flow is coming fast, in sage honey, and where a couple or three men have to handle so many combs in a day, a cold knife would be at a disadvantage. At least I think it would be with us. When we take off a ton, or ton and a half, with two or three men, we must use the easiest plan. Along this coast the cold knife works very successfully because the honey is thinner, and you will find it will cut easier, but you go inland, where it is drier, and it is harder to run a cold knife.

J. F. McINTYRE.

J. S. Harbison—I have inspected quite a large quantity of extracted honey, and I find one of the evils is the excessive use of smoke in handling the combs. Much very choice honey has been ruined in that way, so much so that a delicate taste would reject it on account of its bitter taste. You can not be too careful with reference to this matter. Honey is very sensitive to acquire a bad odor, as much so as butter. Another thing, there is too much honey extracted in an unripe state. It will never be the same honey as when ripened in the hives. These two things are something you must give more attention to, or else extracted honey will fall into disrepute. Carelessness in these matters is one thing that has prevented a more general use of honey. I have had much experience along these lines, and I caution you about using smoke, even on comb honey, because honey is always sensitive, and will acquire a bad taste. The importance of these matters seems to have been overlooked by a great many honey-producers. I warn you in these particulars. You must have your honey in as nice shape as Nature produced it. Much fine honey has been ruined by carelessness in this direction, so much so that I would reject much sage honey because of its bitterness.

(Continued next week.)

Contributed Articles

Disease-Germs—What They Are, and What Promotes or Hinders Their Propagation?

BY J. E. JOHNSON.

FIRST, let me quote from the works of Prof. George Mewman, M. D., F. R. S., Demonstrator of Bacteriology in Kings College, London:

"Latterly, bacteriologists have come to understand that it is not so much the presence of the organisms which are injurious to man or other animals, as it is their products which cause the mischief. These products are termed toxins."

Now, as I have said before, these bacteria are vegetable organisms, or little plants. Some bacteria are reproduced by budding, some from spores, and others by fission. In a favorable medium they increase very rapidly. The pear-blight bacillus, for instance, increases by fission, and one bacillus, in favorable media of proper temperature, and containing enough nutriment, would in 24 hours produce 17,000,000 similar organisms, or over 4,000,000,000 in three days. This organism is plainly visible when magnified 1000 diameters.

Dysentery among either animals or bees is caused by microbes which inhabit the soil near the surface, and are conveyed in dust form to the food eaten or the air inhaled. The three chief forms of the lower bacteria are thus: Round cell form are called coccus; rod form, or those that are longer than broad, are called bacillus; the blight bacterium is about the form of a grain of wheat, and is called bacillus. Those of thread form are called spirillum. The lower bacteria are flowerless, the higher forms of bacteria, however, have actual flowers. Anærobic bacteria can only live in liquids, as the free oxygen kills them, or, rather, the ærobes of the air are antagonistic to them. If the blight-germs could only live in liquid, then the ærobes of the air would kill them on the bee's tongue. However, the blight-germs are not of anærobic nature, although moisture is necessary to their propagation. A culture containing these germs, if merely smeared on the twigs of a pear-tree, will cause the tree to become diseased, if the tree is favorable to the propagation of the blight-germ.

But as I have written on the blight question before, and this is a bee-paper and not a fruit-paper, I will not tire those who are not interested in fruit; however, let me say that this year I had one limb that blighted during our rainy spell, but as it had turned dry when I found it, and a neighbor fruit-grower came over, we cut it out and examined it thoroughly; the blight had died out of itself. There is a good deal of blight near me this year, but not so much as last. Some pear-growers cut out their blight and some did not.

Prof. Burrill, of the Illinois Experimental Station, who was the first to discover blight-germs, in 1879, and announced it to the public in 1880, thinks it quite possible that they live in the soil, and if such be the case, blight-germs would travel in the air when the air was real moist, especially in fog.

Prof. Burrill is sending me cultures or artificial media; he agrees with me that when trees are properly fed they become more resistent to blight.

It is the foul-brood germ I wish to write about. As I have increased to over 50 colonies, and (nothing preventing) will make further increase; and as I find there is an apiary only 25 miles away badly affected with foul brood, which makes me fear it may be even closer, and if my bees get it I want to be able to fight it to a finish. And although this article may not establish any facts concerning the disease, it may draw out more substantial information.

I am not satisfied with the views of some, as very able men, who have had much experience with foul brood, seem to differ greatly. Mr. France and Mr. McEvoy seem to give diseased honey the principal credit of spreading the disease, while, in Cuba, some say honey from a diseased colony will not give others the disease. (See Progressive Bee-Keeper for July, page 187). Now, there are such men as Pasteur and others who have spent nearly their whole lives in investigating the nature of the different pathogenic germs, and it is an established fact that nearly all, if not all, diseases of the animal kingdom are due to microbes; also, that there are some germs that are antagonistic to others, and that there is a constant struggle for the survival of the fittest, or strongest; especially is it so between the pathogenic and saprophytic germs. Two species will often not grow in the same culture together, as the product of one species is death to the other. Now, according to Dr. Germano and others, some disease-germs or spores will survive drying much longer than others. Miguel has demonstrated by tests that some spores can remain alive in a dried state for at least 16 years, while others only a few hours. Now, the question I want to ask is, How long can the foul-brood spores survive drying?

At the Chicago convention, Mr. France related his experience with one case in which the bees contracted the disease from old, foul-broody combs that had been sealed up in hives for eight years. If I mistake not, it is a fact that bacteria must have their proper diet the same as other plants.

Let me further quote Mr. Mewman's works on Bacteria, page 12: "From what we have seen of the diet of micro-organisms, we shall conclude that in some form or other they contain nitrogen, carbon, and hydrogen." The reason I withhold nitrogen from my pear-trees is because I believe the blight-germs' diet to consist largely of nitrogen. Now that is the chief diet of the foul-brood bacteria (it is called bacillus, because of its shape). Is it in the honey, or only in the brood? and why does it thrive in the brood and not in the bee after it is out of the cell? I want to ask those who know.

Have you ever fed a healthy colony on honey from a diseased colony? and have they thereby become diseased? It seems that Mr. Rockenback has, and proved that it does not. (See Progressive Bee-Keeper for July). He seems to have had foul brood among his bees in the very worst form.

According to Mr. France's experience, the spores will survive drying for at least eight years. Now, according to the best authorities on bacteriology, the spores that survive drying a long time are frequently conveyed in the air in form of dust-particles only when dry, or might be when the air be moist, such as fog or when raining. No bacteria will leave a moist medium and travel in dry air; it must be dried first. The laws of gravity also affect all microbes in their travel in the air.

Now, one thing more: Do, or do not, any microbes originate spontaneously? As far back as 1862, Louis Pasteur, the world's greatest bacteriologist, arrayed against the world's greatest scientists of that day, proved by thorough tests that there was no such thing as spontaneous generation, or, at least, it seemed so, for M. Flourens, secretary of the Academy of Science, said: "There is, therefore, no such thing as spontaneous generation." To doubt still is not to understand the question. (See life and work of Pasteur, page 63.) Still, when we take into consideration that the germs of cholora can stand only drying for a few hours, and sometimes it will break out from seemingly no cause except filth and corruption, or overcrowding, lack of ventilation, or certain conditions may develop a new life of the vegetable of the lowest of all vegetable nature.

When Mr. France was asked at the Chicago convention if the disease would start of itself without inoculation, he answered, "Possibly once in a thousand times." I find that other scientists are not entirely satisfied on this question. It is well that we understand the important question more thoroughly. If there should be spontaneous generation once in a million times, then Pasteur's victory is all a mistake, and under favorable conditions they might originate much oftener.

Now, the bee-keepers owe a great deal to the efforts of McEvoy, France, Cook, and others, as it is no doubt they can cure foul brood—thanks to their untiring efforts—but is it not a fact that while it is being cured in one place it is being spread to others, and even possibly nearly every State has it more or less?

When once in a locality, even after cured, can we feel safe that there are not some dormant or dried spores waiting favorable opportunities to start the disease anew, possibly in worse form than ever? Some say that in Cuba, where they probably have had the disease much longer than we, even the McEvoy plan does not cure. The old saying, that "an ounce of prevention is worth a pound of cure," is, no doubt, true in foul brood. If we can become more informed concerning the working of this disease, or the habits or diet of this germ, might we not be enabled to prevent wholly its introduction among our bees? Furthermore, might not the foul brood bacillus be propagated elsewhere except within a bee-hive?

The human mouth is a natural incubator for many germs; some are necessary to our health, digestion, etc. However virulent, microbes have been found in the human mouth, which, when injected under the skin of a rabbit, often resulted in death to the rabbit. (See page 176, Microbes, Ferments and Molds, Vol. No. 56, Industrial Scientific Series, by E. L. Troussart.) I do not think the bacillus alvei would be found in the human mouth, but mention this to show that some germs have different means of propagating.

The "A B C of Bee-Culture" says that the spores of bacillus alvei will withstand two hours boiling, and some be still alive. But scientific authority says that 60 minutes boiling at a temperature of 212 degrees F. will kill all kinds of spores. Now, no doubt many pounds of wax is annually rendered from combs thoroughly alive with spores, and probably even sent from Cuba, this being made up into foundation, distributed broadcast throughout the United States. What assurance have we that this wax has been subjected to 212 degrees F. for two hours? If it has not, can any one give us a truthful reason why foundation made from such wax would not start the disease?

If, as "A B C of Bee Culture" says, the spores will withstand two hours boiling, and live in a dried state eight years, as Mr. France has proven them, they surely can live in foundation unless boiled as stated. I am inclined to believe that since the McEvoy and France plan of treating foul brood began, the disease is being distributed in foundation. Formerly all diseased combs were burned. I hope, however, that I am mistaken.

I believe I understood Mr. France to say at the Chicago convention, that when he rids an apiary of foul brood he has a wax-press with him, and renders up the wax. I would like to ask Mr. France whether he boils the wax two hours or more, or even for 60 minutes. Also, what is done with this wax—is it sold on the market? I understand that Mr. France has tested this matter by taking wax so rendered to the manufacturer and using the foundation afterwards, and no disease resulted. I would like to ask Mr. France, in all kindness, do you firmly believe that all such wax, innocently bought on the market, would be treated as that was, or heated as that was, that is, by all United States wax-foundation manufacturers? Knox Co., Ill.

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

Sulphur for Bee-Paralysis.

I agree with the bee-man, sulphur will cure bee-paralysis. I have used it for two years, when the bees were dying off with it. The way I did was, I took off the cover and sifted it down between the frames in the top box, but I did not spare the sulphur. I then covered them up, and went to the front and put a half cupful on the alighting-board and entrance way, so they would be obliged to go through the sulphur to get into the hive. I repeated the treatment three times. I did not disturb the brood-frames in the brood-chamber; the brood hatched out all right, and they were as strong as any in the apiary.

Merced Co., Calif., Sept. 3. MRS. ARTIE BOWEN.

This is confirmatory of the testimony of Mr. O. O. Poppleton (see page 535). Your plan of proceeding, however, is a little different. He sifted the sulphur with his fingers directly into the brood-chamber, while you put it in the surplus chamber. Of course, it would be likely to sift down into the brood-chamber from the super. Mr. Poppleton also took the precaution to remove unsealed brood or eggs, as hese are injured by the sulphur. You do not say just how you sifted in the sulphur. Mr. Poppleton tried an insect-powder gun, but found he could do better work with his fingers. Would not a pepper-box or flour-dredge work well? Possibly it should be specially made, with the perforated part long and narrow, so as to deliver the sulphur not on the top-bars, but in the space between them.

Blue Vitriol to Kill Grass.

Alva Agee, in the National Stockman and Farmer, gives the following for driveways, walks, etc.:

"All grass and weeds can be exterminated in driveways, walks, etc., by a very strong solution of blue vitriol. I prefer to dissolve one pound of the bluestone to each one gallon of water, and enough of the solution is used to wet the surface of the ground slightly. It is far superior to salt. To dissolve as many pounds of the bluestone as there are gallons of water, it is necessary to suspend it in a bag at the surface of the water, as the strongest solution sinks to the bottom of the barrel. The solution eats through tin quickly."

Why would this not be a fine thing to use in the apiary to keep down the grass and weeds around the hives?

Clipping Queen's Wings.

I enjoy reading the American Bee Journal very much, and especially our own department. I purchased 2 colonies a year ago last fall, and increased to 5, but lost one last spring. I know very little about handling them. My uncle advises me some, but he lives about 4 miles from me, so I have to blunder along most of the time.

I wanted to clip my queens this spring, but felt timid about it, as I have no text-book, and I never saw any one clip a queen. I had very little honey last year, but I am in hopes to have more this year. There is lots of white clover in blossom here. It seems favorable for a good crop.

NINA BURGETT.

I know just how nervous you feel about clipping those queens, but really it is not such a dreadful thing to do, after all. First catch the queen by the wings, then hold her by the head and thorax in the left hand, slip the scissors under the wings on one side, give a clip, and the thing is done.

Bee-Lore in the Public Schools seems to be on a par with a good deal of the bee-lore in general found outside of the bee-papers and bee-books. This view is confirmed by the receipt of a number of passages sent by Ella Anderson, who is very likely one of the "school ma'ams" of the great State of Texas. Concerning the passages quoted, she says: "The above is a specimen of the way in which bee-keeping is taught in our school-books. It has been copied 'word for word' from one of the most common books now in use." Amongst the information given is this:

> "First of all we see some half-dozen bees around the door...... If we approach too near the front of the hive, one of these sentries will dash forward with an angry buzz; and if we do not wisely take the hint, the brave little soldier will soon return with help from the guard-room to enforce the command."

Fancy a cross bee letting up to go and get some other bee to do the stinging.

"The honey-gatherers and the 'wax-gatherers' carry their stores in their throats." Do they gather the wax from flowers, or where? and is so much wax in their throats a sure preventive of croup? Just one more precious bit:

> "The honey-gatherers and 'wax-gatherers' draw in the sweet juices from flowers by their 'trunks.' The 'trunk' serves as a mouth and pump. The liquid passes through this into the throat, and is thus carried to the hive."

Isn't that richness for you?

Why Not Help a Little—both your neighbor bee-keepers and the old American Bee Journal—by sending to us the names and addresses of such as you may know do not now get this journal? We will be glad to send them sample copies, so that they may become acquainted with the paper, and subscribe for it, thus putting themselves in the line of success with bees. Perhaps you can get them to subscribe, send in their dollars, and secure for your trouble some of the premiums we are constantly offering as rewards for such effort.

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

TEXAS AND APICULTURE.

Texas the only State having an experimental apiary, and the apiary manned. Hardly thought it. Well, one out of Uncle Sam's family of forty-five is some better than that apiculture should be totally ignored. Credit to Texas!

Wonder what Texas legislature was thinking of when they supplied a foul-brood law, and no funds to enforce it. Well, now, maybe they thought apicultural public spirit needed a little cultivating—and that if a few hundred dollars of cash were appropriated it would kill off the desirable crop. Page 533.

NUMBER OF BEE-FARMS—AN ERROR.

So taking the United States as a whole only one farm in eight has bees, but in Texas one farm in six. That, with the fact that Texas is a very big State, and comprising considerable extra-good bee-territory, has put them nominally at the head.

Who is responsible for this enormous Munchausenism, and what did the original author intend to say? "The average production of wax per colony for the United States was 43 lbs.; for Texas, 41 lbs.; for Arizona, 69 lbs.; and California, 89 lbs." Thus, in Texas an average colony yields 12 pounds of honey and 41 pounds of wax. Page 534.

BEE-PARALYSIS AND ITS CURE.

I think Mr. O. O. Poppleton's article on paralysis to be a very instructive one. Tallies well with the general puzzlement on the subject. An erratic disease with no visible rules. Colonies in apparent health suddenly cut down to a remnant, and diseased colonies suddenly recovering without known cause. This last, if correct, may be relied on to furnish us with a large crop of worthless "sure cures." But we see Mr. Poppleton has a sure cure himself—dusting every bee with sulphur, after the brood is all taken away. But he doubts whether the cure is of much practical value because he finds the colony, when the cure is accomplished, to be so weak. If he's right, that the disease is wholly of the adult bees, and not at all in the brood, that will greatly help the apiarist in making his fight. New, healthy colonies can be built up, and all old diseased bees destroyed.

And an important riddle this is: "While I am satisfied that it is to a limited extent contagious, I do not know exactly how the contagion is communicated." Page 535.

WHILE MAN REMAINS—AN APIARY CART.

While man remains on the earth, eh? Quite a benediction. Well, why not the American Bee Journal while man remains on earth? It will continue unless it stops; and why should it stop, Mr. Parker?

You're right to agitate for just the right kind of a honey-transporter about the apiary. I use a hand cart, which is much better than a wheelbarrow in some respects—worse, if anything, about getting tipped over; and the lifts are too high. Just comes to me that perhaps a four-wheeled hand-cart is the thing—a hand-cart with the body all in front of the wheels, and low down, and furnished in front with two light wheels no bigger than plow wheels—which same are to carry, or to be carried, according to load and circumstances. Must our vehicle have springs, or can we do without them? Page 541.

BIG JACK-KNIFE A GOOD APIARY TOOL.

The apiary tool for most constant use might very well be a jack-knife if it was a big enough one. But where will one find a comfortable assortment of big jack-knives to choose from? Just glance over the stock of a big city house once. Disgustingly little things almost all of them—as if the world were peopled with dudes and babies. Perhaps there will not be one in the stock even half big enough for the purpose named. Fashion. Cowardice. Half mankind don't dare to carry a knife as big as they know they need. Years ago it got to be a sort of a test—country man carried a big knife, and the city man carried a little one—till callow young men everywhere wanted to be seen with the city man's kind of knife. The manufacturer would just as lief make big knives; but he can't afford to make them unless some one will buy them. Page 542.

DROWNING QUEENS FOR INTRODUCING.

Will the drowned-and-brought-to-life queen be any better than the ruined-in-the-mail queen, Dr. Miller? Important conundrum, which, I guess, we will credit to you, Mr. A. C. F. Bartz. Dr. Miller kind o' got away when I tried to catch him for cutting off the queen's legs; but we've got him this time for drowning her—on his own confession. Page 542.

THE IDEA OF SUGAR CAUSING FOUL BROOD!

Quite an idea to go on the "important if true" list is suggested by Mr. J. M. Hobbs, on page 543. He is quite sure that the feeding of sugar greatly favors the development of foul brood. Barely possible that there may be something in this; but some of the folks will say, "Sugar!"

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Wintering a Small Colony—Buying Bees.

I am a beginner and am desirous of working with bees and having them, and would like a little information.

I have one colony of bees that I hived while swarming, July 10, in the railroads yards, and carried them 100 miles on my engine. I put them in a hive the next morning and they went to work at once, early and late. Now what I wish to know is this:

1. The hive is a 10-frame hive with foundation, frame 9x7 inches. How many of these frames full will it require to winter this colony, there being, as near as I could judge, about one or one and a half cupfuls of bees?

2. The honey-flow has been good, but it is a little slack now, while pollen is very good. I placed about one-half pound of good sugar syrup in front of a hive, which they carry in in about four hours each day. Is this all right, in order to save feeding or disturbing the bees while in winter quarters?

3. Where can I procure a few good colonies stocked with queens, and at what time would you have them shipped? I wish the golden Italians already in the hives. MISSOURI.

ANSWERS.—1. If not more than 1½ cupfuls of bees are in the hive, they would not consume the honey in one full frame; but it is pretty safe to guarantee that so small a colony will not live till spring. Their chances may be better if you put them in a cellar for the winter.

2. Yes, that's all right, if they haven't enough stores.

3. It is now so late in the season that unless you have a specially good opportunity to obtain them conveniently near and at a bargain you will do well to wait till next spring. Look out for the advertisements in these pages about that time, and you may see what you want. By making inquiry it is possible you may be able to supply your wants from bee-keepers near you, for you will find it expensive business having full colonies sent from a distance. It would cost less to buy nuclei in the spring and build them up.

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Queen Questions and Some Others.

1. How should bees *act* when favorable to accepting a queen introduced to a colony that has been queenless perhaps ever since the colony was hived last May?

2. What do bees mean by one grabbing another, a strange bee and two or more run round the prisoner as if to examine it while the other holds to it? This looks to me like they were playing highway robbery—but only get back their own. Do they thus rob a bee?

3. What way do you account for my finding, in almost if not every hive examined, unsealed queen-cells? Certainly they can't contemplate supersedure.

4. Should a young queen hatch out at this season (July 31) what chance would she have to become fertile when all the colonies have disposed of their drones?

5. Would she go unfertile until next spring, when the drones appear, and then meet the drone? and would such a queen be of any value?

6. Would she lay drone-eggs between now and then, or remain as a dead-head in the hive?

7. You say it is easier to introduce a queen to a colony that has been queenless only two or three days. How would you count the time, from the time you remove the old queen, or should the old queen be removed for 48 hours before the queen to be introduced is placed in the hive? Or, would you remove the old queen and immediately put in the other, enclosed in her cage, as it would require at best from 24 to 48 hours for the bees to release her?

8. Should a good queen lay eggs all through the winter in this

climate, or is there a time with all queens of every climate when they are fully at rest from laying? Would feeding a colony cause a queen to continue to lay?

9. Would frames put in crosswise, let them be brood or extracting shallow frames, make any difference with the bees accepting and filling them, and say the brood-chamber frames are lengthwise and the super frames crosswise? MISSISSIPPI.

ANSWERS.—1. It is easier to tell by looking at them whether they feel like accepting her than it is to tell how one tells. If the bees are hostile to her, they may be grasping the wires of the cage as if trying hard to get at the queen, while if they feel kindly toward her they sit quietly and loosely on the cage. That's not telling you very much, is it? Well, I may as well tell you that if the case were right here before me, I couldn't always tell for certain. They might appear to be looking as sweet as you please at the queen, with murder in their hearts all the while.

2. Yes, a strange bee appears often to be made to give up its honey voluntarily, saying, "See here, girls, if you'll just let me off I'll give you every bit of honey I have."

3. It must mean one of three things—swarming, supersedure, or queenlessness.

4. She would have no chance if all drones were absent, but there are generally at least a few drones at any time when bees are daily flying, even if you can't find any.

5. I don't know; I wouldn't give much for her chance. Some say they have had queens fertilized in the fall that did not lay till spring, and that they were all right. But a queen whose virginity extends from fall to spring might safely be warranted as worthless.

6. A virgin reared in the fall and not fertilized before winter would probably lay no eggs before spring; and if she then should lay any eggs they would produce only drones.

7. The time a colony is queenless should be counted from the time the queen is removed. A common way is to remove the old queen and put in the caged queen immediately, the arrangement being such that it takes about two days for bees to release the new queen. But that "about" is not very definite; sometimes a queen is released in less than a day, sometimes in three days or more. It is claimed that a still better way is to put the caged queen in the hive without disturbing the old queen, leaving no chance for the bees to release the caged queen; then 48 hours later to remove the old queen, and give the bees a chance to release the caged queen.

8. I don't know, but I think a queen takes at least a short lay-off from laying in any climate. Feeding continuously is likely to induce laying; but sometimes it's very hard to start laying. But continued feeding when the flow stops would be likely to keep the queen laying.

9. It wouldn't make any difference.

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Queenless Colonies Balling the Queen.

1. About the first of this month (September), in looking over my bees I found Nos. 10, 12, 13, 17, 29 and 30 with no eggs, larvæ or brood of any kind, and being so early I took it for granted they were queenless. I had three or four laying queens in nuclei, so I just turned them loose in some of the queenless colonies and they were all accepted. I gave the others frames containing eggs in all stages, and ordered some queens, and was surprised to find none started. So I run them through the perforated zinc and found no queens, and introduced my queens and they were accepted all right. Why did they not start queen-cells?

2. As they must have been queenless at least 21 days, why did they not have a laying worker?

3. I left one nucleus to themselves, when I took their queen, and they started several cell-cups over cells of bee-bread but none on cells with eggs. Why did they do that?

4. By some unaccountable blunder I marked one hive queenless that had a laying queen with plenty of brood, and introduced a fine queen. Yesterday they had her nearly let out, and to-day she was out, and I opened the hive to see if she was all right, and discovered my blunder; and while hunting for my queen I found the old one balled in the bottom of the hive, but could not find my new one. I left no bees in the cage when I introduced the queen. Why did they ball *their* queen? IOWA.

ANSWERS.—Oh, dear! what makes you send so many hard ones all in one bunch? I don't like to use up my whole stock of "I don't know" answers, so must guess at some other answers the best I know how.

1. It is possible that so late in the season, and so near the time for the cessation of laying, the bees didn't think it worth while to bother about starting queen-cells. A better answer is that queenless bees have a trick of failing sometimes to start cells from brood given—not such a very uncommon occurrence, either—and no one seems ever to have given any reason for it. Just the way the bees have.

2. Better say "laying workers," for generally a lot of those nuisances are present. Laying workers don't always set up business in 21 days of the removal of the queen. In this case, too, there was less chance for it, because it was late in the season, and laying workers are not likely to start after the time when egg-laying ceases naturally in some colonies.

3. Can't make even a guess at an answer.

4. Perhaps for protection. It is not a very uncommon thing for bees to ball their own queen when alarmed in any way. The presence of a strange queen would suggest to them that their own queen needed protection. In one case, however, I had a queen protected to death because some strange queens were caged in the hive.

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Removing Supers from Hives.

1. When should all supers be removed from the hives?

2. Will the bees feed on honey in the super now, or from the brood-chamber? ILLINOIS.

ANSWERS.—1. As soon as all storing is over for the season. In white-clover regions it is the best to take off supers at the close of the white-honey harvest, and then put them on again when needed for a fall flow, if a fall flow comes.

2. Both. As brood-rearing slackens, and empty cells appear in the brood-chamber as a consequence, you may count on the bees carrying down honey out of the super to store in the brood-combs.

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Beedom Boiled Down

Whisk-Broom Bee-Brush.

There has been so much said in the journals relative to bee-brushes that I want to add just a few words. It seems to me that there has never been a first-class brush described; and it seems to me that, when we revert to a bunch of weeds, we are not making much advancement, aside from the untidiness of the apiary, in having weeds growing so plentifully that we can grab up a handful at every hive. We can all buy the best bee-brush at any store for 10 cents; and that is just an ordinary whisk-broom. Tack a sheet of sandpaper on your workbench or on a board and take hold of the handle of the whisk-broom with one hand, and with the other one press the end of the brush down flat on the sandpaper, and then pull it across it a few times, and you will have all the stiff points cut down so it will be pliable and soft, and no danger of mutilating the cappings. When brushing, hold the brush flat to the comb, or practically so; and if it gets daubed with honey, dip it in a dish of water, and it will be clean again, and the moistening makes it more pliable. I have one I have used for 15 years, and it is good for as many more. I always wet it before beginning my day's work.—Elias Fox, in Gleanings in Bee-Culture.

Introducing Virgin Queens in Pairs.

This is the latest kink practiced by the A. I. Root Co., although the same thing seems to have been previously practiced by Swarthmore. The plan is thus given in Gleanings in Bee-Culture, as used by their apiarist, Geo. W. Phillips:

Here is a colony, we will say, that is queenless. Instead of giving it *one* caged virgin, to be released on the candy plan, he gives it *two* of flying age; but the loose slide protecting the candy is removed, exposing the food in one cage, leaving it in the other cage covered by the slide. The bees will release the queen of the first mentioned. In a day or so she will become fertilized, and go to laying. The other virgin is kept caged in the mean time. As soon as queen No. 1 is laying, she is taken out, and *at the same time* the slide covering the candy to the other cage is set back, the bees release queen No. 2. Before that is done, another virgin is put into the hive, caged with the candy protected. Queen No. 2 is accepted, and ere long begins to lay. She is removed, and the slide of cage No. 3 is slid back, and another virgin put in, and so on the cycle proceeds. The point is here: Both queens while in the hive acquire the scent of the bees and of the comb, so that when one queen is removed the other queen is already introduced except releasing, which the bees do in a few hours, and she again is in a fair way to become the mother of the flock. During the interim between the time the queen is released and when she becomes laying,

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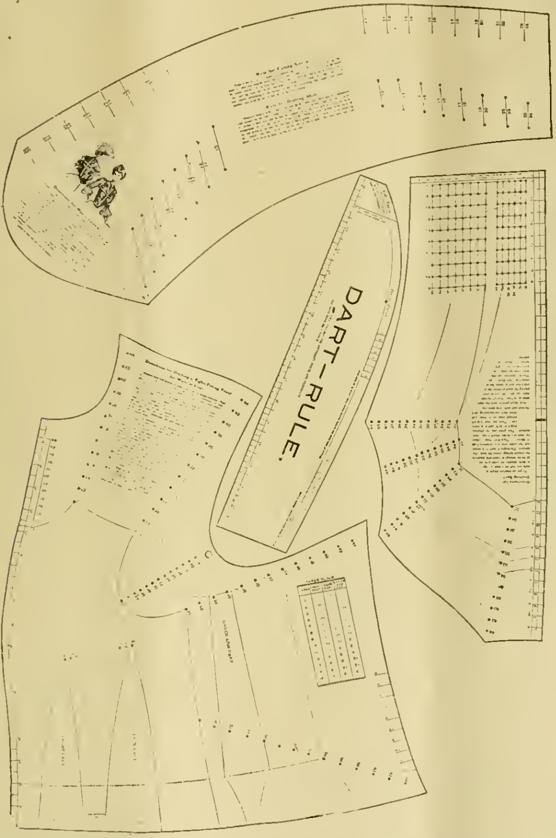
We think all ladies will agree with us in saying that every man should at least understand some business, with which, in case of necessity, he could support himself and family. The wealthiest people frequently come to want, and wretched, indeed, is the man who cannot earn a living after his wealth is gone. He sometimes fills the grave of a suicide. And why, in this enlightened age of progression, should not woman, as well as man, be able to depend on her own resources? In case her husband dies in poverty, must she starve or depend on charity? In case her husband fails to provide and grossly mistreats the woman he has sworn to cherish, must she humbly submit? **A THOUSAND TIMES, NO!** Let every woman, before she marries, have some knowledge that can be used to make her a living. Every mother, rich or poor, should make her daughters, in a certain degree, independent, by giving them some kind of a trade, and teaching them to be self-reliant. Mothers should have their daughters learn to sew, and not neglect this important part of their domestic education. The daughter so taught will not only make a better wife and mother, but will also be more likely to secure a better husband, and will always command his respect. He will not look upon her as a helpless "know-nothing," but will know that if he fails in his duties, she can live without him, and this can only strengthen the bond between them. A thorough knowledge of dressmaking can always be turned into gold, and become the means of support for the mother and her little ones. She may never have to use this knowledge in this way, but she has a trade and can use it if necessary.



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the queen is acquiring the scent of the colony.

But Mr. Phillips goes one step further. Here is a colony that is not queenless, but we wish to sell the queen in 2 or 3 days. He accordingly cages the virgin in the hive, and 3 days after removes the laying queen, exposes the candy of the caged virgin so the bees can release her, when she is immediately accepted. There, don't you see, there is a lapse of only a few hours of actual queenlessness? We will say that, in 5 hours after the laying queen is removed, the virgin is stalking abroad over the combs, quite at home.

This thing is no experiment. We have been testing it for weeks to see if it would work under all conditions.

If the virgins are hatched in nurseries, and a supply of them is kept on hand, no colony need be queenless more than long enough for the bees to eat out the candy, which I should say would take about 5 hours as we provision the cages. By this plan one can get almost a double output of queens.

Spraying Fruit-Bloom Proves to Be a Boomerang.

Last year I had my colonies very strong in order to get as much of the apple honey as possible, that being my favorite honey; and just when the bees began to store rapidly I noticed all at once thousands of them dropping around the house-apiary and in my yard; and my colonies were depopulated a half, if not more, in 2 days' time. I was satisfied that poison had been used in spraying fruit-bloom, and immediately made inquiry. All parties denied spraying, yet I found that one had purchased a fruit-sprayer and had sprayed his trees at that time, even though he denied doing so. However, I made a public announcement that the party or parties who killed my bees by spraying his fruit during the time of bloom would also destroy his own fruit, and my prediction proved true; for the same party that had sprayed his trees at that time scarcely had any sound fruit, while an orchard within a stone's throw had hundreds of bushels of fine matured fruit, and no spraying whatever had been done; so I guess there will not be any more spraying done during full bloom in this section.—J. A. Golden, in Gleanings in Bee-Culture.

A Model Bee-Cellar in Northern Michigan.

The cellar is 14x24 inside. It is built 3 feet under ground and 4 feet above. The foundation is a stone wall 3 feet deep with 6 inch studding on the wall, boarded both sides, and filled in with sawdust. There are also inch cleats nailed on inside, and lathed and plastered, making a 1-inch dead-air space.

In building the stone wall we laid in 2x6 plank, letting them project 2 inches, and lathed and plastered on these, making a dead-air space on the stone wall, to do away with the dampness.

In one corner there is a tile drain, or intake, for fresh air, leading out 6 rods under ground, 3 feet deep. The cellar is built on higher ground, which makes it very convenient for underground ventilation. There is also a ventilator leading out through the roof 12 inches square. This comes within 3 feet of the cellar bottom, and is arranged to shut off too much draft. The outside has been reinforced with a foot of sawdust coming above the cellar a foot, with tarred felt covering the whole. The floor above is made frost-proof by nailing on ceiling, filling in with sawdust between the ceiling and floor, and nailing inch strips to the ceiling, and then lathing and plastering. This cellar has never been cold enough to freeze, the temperature ranging from 41 to 45. I can put in 200 8-frame hives if necessary. I have wintered 150 in this cellar very nicely. It stays very dry and nice all winter. The upper part is used as a workroom and for extracting. The cost was about $150.—JAMES HILBERT, in Gleanings in Bee-Culture.

Good Honey at 10 Cents Cheaper than Thin at 8.

I tested some well-ripened honey a few days ago, and it tested about 14½ pounds to the gallon. I figured out how much water it would take to make honey 13 pounds to the gallon. It takes about 28 percent of water. That is, take 100 pounds honey, 14½ pounds to the gallon, add 28 pounds of water to it, 10 pounds to the gallon, and you still have a honey 13 pounds to the gallon, and the manufacturer who buys the best honey at 10 cents a pound gets it cheaper than the one who buys the other at 8 cents.—MR. DARLING, in Canadian Bee Journal.

Our Sweet Tooth.

That Uncle Sam has a "sweet tooth" is demonstrated by the record of sugar importations for the year, which have increased to the largest total ever known. In addition to the sugar raised in this country more than 5,000,000,000 pounds have been imported, which with the domestic production, would give each man, woman and child in the United States about seventy-two pounds each per annum. As many persons do not eat anything like this amount and much sugar is introduced into the human body in other forms than the refined product, there must be many people who consume more than their own weight of sugar in a year. The quantity eaten in the form of confectionery is enormous, and, if sugar would do it, America would be a land of sweetness if not of light.—Boston Transcript.

To eat one's own weight of sugar in a year is a menace to health, if not to life. What a pity those enormous consumers of sugar could not be induced to consume their sugar in the more wholesome and delicious form of honey.

The California Sages.

White sage is perhaps generally thought by outsiders to be the principal one of the sages; but Californians say it cuts no great figure, the black and purple sages being away ahead, both in quality and quantity.—[Yes, the average Easterner gets the impression that the white sage is the main honey-plant of California, because all California honey from sage is named *white* sage. The black sage produces a great deal more, and the purple or button sage comes in as a close second. But white *sage* honey is not misnamed, because it *is* white, and it is *sage*, but not necessarily *white-sage*-plant honey. —ED.]—Stray Straws in Gleanings in Bee-Culture.

FROM MANY FIELDS

Great Ragweed.

What is the enclosed weed? I think the local name here is "bull-weed." Bees are fond of it. T. C. K.

Knox Co., Tenn.

[The plant is the Great Ragweed, and grows abundantly along moist river-banks. The bees may get considerable pollen from it, but not much honey. Botanists know the weed as Ambrosia trifida, and it belongs to the great Composite family.—C. L. WALTON.]

Amount of Honey One Bee Stores.

I saw in the American Bee Journal a question asked as to how much honey a bee can carry during its life. I am an old bee-hunter, and have found a good many bee-trees in the woods. I have seen a bee lick up two thin drops of honey at one time and carry it home. If it can carry two dops of honey at a time, how many drops can it carry in one day? I will say it can carry three loads of honey in one hour. If so, it can carry 30 loads in 10 hours, or 60 drops, which make a teaspoonful of honey. So a bee can carry 26 teaspoonfuls of honey in 26 days, or the time of its active life. This makes about one-half of a small teacupful of honey.

Dr. Miller says the life of a worker-bee is 26 days, and I think so, too. I don't say that all the worker-bees will carry two drops of honey at a load, but when a bee sucks its fill of honey it can carry two drops.

I have watched bees for the last 30 years, and I am satisfied that my figures are right.

I don't say that a brown or black bee will carry two drops of honey at one time, but I do say an Italian bee will do it. So one-half a teacupful of honey is all that a bee will store during its life. That is my idea; and I think I am right. E. E. WILSON.

Van Buren Co., Ark., Sept. 15.

[Even if it is admitted that a bee can store a half teacupful (or say ¼ pound) of honey during its working life, it would not be safe

FREE as a.... Premium

A Foster Stylographic PEN....

This pen consists of a **hard rubber** holder, tapering to a **round point**, and writes as smoothly as a lead-pencil. The **point** and **needle** of the pen are made of **platina**, alloyed with **iridium**—substances of great durability which are not affected by the action of any kind of ink.

They hold sufficient ink to write 10,000 words, and **do not leak or blot.**

As they make a line of **uniform width** at all times they are **unequaled for ruling purposes.**

Pens are furnished in neat paper boxes. Each pen is accompanied with full directions, filler and cleaner.

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Send TWO NEW SUBSCRIBERS to the American Bee Journal for one year, with $2.00; or send $1.90 for the Pen and your own subscription to the American Bee Journal for one year; or, for $1.00 we will mail the pen alone. Address,

(Exact size of the Pen.)

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144 & 146 Erie St., Chicago, Ill

HONEY-JARS.

I can sell you a White Glass Honey-Jar, holding 15 ounces of honey, at $4 00 per gross. Also the standard square one-pound Jar at $4.50 per gross. Sample of either Jar by mail on receipt of 10 cents for postage.

J. H. M. COOK, Bee-Keepers' Supplies
62 Cortlandt St, NEW YORK CITY.
41Atf Please mention the Bee Journal.

DAIRYMEN ARE DELIGHTED to meet those who work for us. Cow keepers always have money. We start you in business. You make large profits. Easy work. We furnish capital. Send 10 cents for full line of samples and particulars.
DRAPER PUBLISHING CO., Chicago, Ills.

WANTED! Fancy Comb Honey

In No-drip shipping-cases. Also extracted, in barrels or cans. Mail samples and quote your best price delivered Cincinnati.

The Fred W. Muth Co., Front and Walnut, CINCINNATI, OHIO.

to estimate from that basis what an average colony of bees will produce during a season. Suppose there are only 40,000 bees in a colony during the 26 days, and only half of them do business, according to Mr. Wilson, they should carry in 5000 pounds. Perhaps 200 pounds of honey would be an exceptional yield for 26 days; then what became of the other 4800 pounds?

The thing can not be figured out. It is all guess-work. And one man's guess is about as good as another's in such a case.

We "guess" we'll eat the honey and let the other fellow do the figuring.—EDITOR.]

A Peculiar Year—Swarming.

The last month and a half has been anything but favorable for honey-production in this locality. I think the crop will fall much below the estimate of many. And I fear many colonies, unless they are looked after and fed, will not go through the winter, if we should have a severe one.

I said this had been a peculiar year; well, it seems so to me. Let me tell you something—but, say nothing about it, for I feel almost ashamed of myself when I think of it. I have had 54 swarms from 31 colonies, and how many more there would have been no fellow can tell if I had not struggled continually to prevent swarming.

I have made a colony from a caged queen left on a table with a box over her to protect her from the sun. Bees came from all parts of the yard and clustered on the cage. They did not come at swarming-time, but one at a time, till there were 200 or 300 bees, which stayed day and night till the fourth day, when they swarmed as naturally as any swarm as you ever saw; but the queen being caged, they returned and clustered again. I made a nucleus colony for them; added a comb at a time as they needed, and now they are a good colony. Who says one cannot get a colony of bees if he has a queen? WM. M. WHITNEY.

Walworth Co., Wis., Sept. 31.

CONVENTION NOTICES.

Illinois.—The annual meeting of the Northern Illinois Bee-Keepers' Association will be held in the Court House, in Rockford, Ill., Tuesday and Wednesday, Oct. 20 and 21, 1903. A good program is being prepared, and all interested in bees are invited to attend.

Cherry Valley, Ill. B. KENNEDY, Sec.

Connecticut.—The Connecticut Bee-Keepers' Association will hold their fall meeting in the Capitol at Hartford, on Nov. 4. All bee-keepers are cordially invited to attend. For full information, write the Secretary.

MRS. EDWIN E. SMITH, Sec.

Watertown, Conn.

FENCE! STRONGEST MADE. Bull Strong, Chicken-Tight. Sold to the Farmer at Wholesale Prices. Fully Warranted. Catalog Free.
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25,000 lbs. of the very best Extracted Honey for sale in new cans at 6½ cents per lb. for the lot. Also 3,000 lbs. of A No. 1 white comb honey in 4x5 sections at 13 cts. per lb.
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850,000 GRAPE VINES
100 Varieties. Also Small Fruits, Trees, &c. Best rooted stock. Genuine. cheap. 2 sample vines mailed for 10c. Descriptive price-list free. Lewis Roesch, Fredonia, N.Y
Please mention Bee Journal when writing.

BEE-BOOKS

SENT POSTPAID BY

GEORGE W. YORK & CO.,

144 & 146 E. Erie St., - CHICAGO, ILL

Forty Years Among the Bees, by Dr. C. C. Miller.—This book contains 328 pages, is bound in handsome cloth, with gold letters and design; it is printed on best book-paper, and illustrated with 112 beautiful original half-tone pictures, taken by Dr. Miller himself. It is unique in this regard. The first few pages are devoted to an interesting biographical sketch of Dr. Miller, telling how he happened to get into bee-keeping. Seventeen years ago he wrote a small book, called "A Year Among the Bees," but that little work has been out of print for a number of years. While some of the matter used in the former book is found in the new one, it all reads like a good new story of successful bee-keeping by one of the masters, and shows in minutest detail just how Dr. Miller does things with bees. Price, $1.00.

Bee-Keeper's Guide, or Manual of the Apiary, by Prof. A. J. Cook, of Pomona College, California. This book is not only instructive and helpful as a guide in bee-keeping, but is interesting and thoroughly practical and scientific. It contains a full delineation of the anatomy and physiology of bees. 544 pages. 295 illustrations. Bound in cloth. 19th thousand. Price, $1.20.

Langstroth on the Honey-Bee, revised by Dadant.—This classic in bee-culture has been entirely re-written, and is fully illustrated. It treats of everything relating to bees and bee-keeping. No apiarian library is complete without this standard work by Rev. L. L. Langstroth—the Father of American Bee-Culture. It has 520 pages, bound in cloth. Price, $1.20.

A B C of Bee-Culture, by A. I. & E. R. Root. — A cyclopedia of over 500 pages, describing everything pertaining to the care of the honey-bees. Contains about 400 engravings. It was written especially for beginners. Bound in cloth. Price, $1.20

Scientific Queen-Rearing, as Practically Applied, by G. M. Doolittle.—A method by which the very best of queen-bees are reared in perfect accord with Nature's way. Bound in cloth and illustrated. Price, $1.00; in leatherette binding, 60 cents.

Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—It is nicely illustrated, contains 160 pages. Price, in cloth, 75 cents; in paper, 50 cents.

Advanced Bee-Culture, Its Methods and Management, by W. Z. Hutchinson.—The author of this work is a practical and entertaining writer. You should read his book; 90 pages; bound in paper, and illustrated. Price, 50 cents.

Bienen-Kultur, by Thomas G. Newman. —This is a German translation of the principal portion of the book called "Bees and Honey." 100-page pamphlet. Price, 25 cents.

Apiary Register, by Thomas G. Newman.—Devotes two pages to a colony. Leather binding. Price, for 50 colonies, $1.00.

Dr. Howard's Book on Foul Brood. —Gives the McEvoy Treatment and reviews the experiments of others. Price, 25 cents.

Winter Problem in Bee-Keeping, by G. R. Pierce.—Result of 25 years' experience. Price, 30 cents.

Foul Brood Treatment, by Prof. F. R. Cheshire.—Its Cause and Prevention. 10 cts.

Foul Brood, by A. R. Kohnke.—Origin, Development and Cure. Price, 10 cents.

HONEY AND BEESWAX

MARKET QUOTATIONS

CHICAGO, Sept. 18.—Sales are not frequent enough to keep receipts cleaned up. They are made on a basis of 13@14c for comb of the best grades. Extracted, white, 6½@7c for clover and basswood, and 6@7c for other white honeys; amber, 5½@6½c; according to flavor and package. Beeswax, 30c. R. A. BURNETT & CO.

KANSAS CITY, Aug. 25.—Receipts of comb honey more liberal; demand improving. We quote fancy white comb, 24-section case, $3.25; No. 1, white amber comb, 24-section case, $3.00; No. 2, white amber comb, 24-section case, $2.75; Extracted, white, per lb., 6½c; amber, 5½@6c. Beeswax, 25@30c. C. C. CLEMONS & CO.

ALBANY, N.Y., Sept. 19.—Honey market firm on light receipts so far and good demand. We quote: Fancy white, 16c; No. 1, white, 15c; No. 2, 14c; buckwheat, 13@14c. Extracted, good demand just now for Jewish holidays, for candied honey, at 6@6½c for dark; white clover, 7@7½c; mixed amber, 6½@7c. Beeswax, 30c.
H. R. WRIGHT.

CINCINNATI, Oct. 1.—Comb and extracted honey are coming in freely, and the demand is good with steady prices. We are making sales at the following prices: Amber extracted at 5¾@6½c: white clover, 6½@7½c. Fancy comb honey, 15c. Beeswax, 30c.
THE FRED W. MUTH CO.

NEW YORK, Sept. 28.—Comb honey is arriving quite freely now, and is finding ready sale at 15 cents per pound for fancy white, 13@14c for No. 1 white, and 12c for No. 2 white and amber. Very little buckwheat on the market as yet, and prices are hardly established.

Extracted honey is ruling about the same as last with plenty of offerings of all grades.

Beeswax is somewhat declining and selling at present at from 28@29c per pound.
HILDRETH & SEGELKEN.

CINCINNATI, Sept. 18.—The extracted honey market has weakened a little as white clover is offered quite plentiful; prices of sales I made ruled as follows: Amber, in barrels, 5@5½c; water-white alfalfa, 6@6½c; fancy white clover, 6½@7½c. Comb honey, fancy water-white, 14@15½c. No sales for lower grades. Beeswax, 28c. C. H. W. WEBER.

SAN FRANCISCO, Sept. 2.—White comb honey, 13@14c; amber, 9@11c. Extracted, white, 5½@6c; light amber, 5@5½c; amber, 4¼@5c; dark amber, 4@4¼c. Beeswax, good to choice, light, 27½@29c; dark, 25@26c.

Most of the comb on market is of small lots, and while being very steadily held, fails to move as readily or to as good advantage as would straight carload lots of uniform and high grade. Extracted is in high request, with offerings of only moderate volume, and market firm at prevailing values.

WANTED! FANCY COMB HONEY
In no-drip shipping-cases. Also Amber Extracted in barrels or cans. Quote your best price delivered Cincinnati. The Fred W. Muth Co.
32Atf Front and Walnut, CINCINNATI, OHIO.
Please mention Bee Journal when writing

WANTED—Comb Honey in quantity lots. We are perhaps the only dealers in this article owning as much as 150,000 pounds at one time. Please state quantity, quality and price asked for your offerings. Thos. C. Stanley & Son,
24Atf MANZANOLA, COLO., or FAIRFIELD, ILL.
Please mention Bee Journal when writing

WANTED—Extracted Honey.
Mail sample and state lowest price delivered Cincinnati. Will buy FANCY WHITE COMB HONEY, any quantity, but must be put up in no-drip shipping-cases.
C. H. W. WEBER,
2146-48 Central Ave., CINCINNATI, OHIO.
24Atf Please mention the Bee Journal.

$300,000,000.00 A YEAR and you may have part of it if you work for us. Uncle Sam's poultry product pays that sum. Send 10c for samples and particulars. We furnish capital to start you in business. Draper Publishing Co Chicago Ill

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The Best Bee-Goods in the World....

are no better than those we make, and the chances are that they are not so good. If you buy of us **you will not be disappointed. We are undersold by no one.** Send for new catalog and price-list and free copy of THE AMERICAN BEE-KEEPER; in its thirteenth year; 50 cents a year; especially for beginners.

—THE—
W. T. Falconer Mfg. Co.,
JAMESTOWN, N. Y.

W. M. GERRISH, Epping, N.H., carries a full line of our goods at catalog prices. Order of him and save the freight.

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If you want the Bee-Book

That covers the whole Apicultural Field more completely than any other published, send $1.20 to

Prof. A. J. Cook, Claremont, Cal.,
—FOR HIS—
"Bee-Keeper's Guide."
Liberal Discounts to the Trade.

Hives, Sections, Foundation,
etc. We can save you money. Send list of goods wanted and let us quote you prices. ROOT'S GOODS ONLY. Send for Catalog.
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BINGHAM'S PATENT Smokers
25 years the best. Send for Circular.
25Atf T. F. BINGHAM, Farwell, Mich.
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For Sale 10 to 100 Colonies of Yellow Italian Bees in Dovetail hives. Bees and hives in first-class condition.
JOHN DIVEKEY
38A4t 346 S. River St., AURORA, ILL.

Long Tongues Valuable
South as well as North.

How Moore's strain of Italian roll in the honey down in Texas.

HUTTO, TEX., Nov. 19, 1902.

J. P. MOORE.—Dear Sir:—I wish to write you in regard to queens purchased of you. I could have written sooner, but I wanted to test them thoroughly and see if they had those remarkable qualities of a three-banded Italian bee. I must confess to you I am more surprised every day as I watch them. They simply "roll the honey in." It seems that they get honey where others are idle or trying to rob; and for gentleness of handling, I have never seen the like. Friend E. R. Root was right when he said your bees have the longest tongues; for they get honey where others fail. I will express my thanks for such queens. I am more than pleased. I will stock my out-apiaries next spring with your queens.

Yours truly, HENRY SCHMIDT.

The above is pretty strong evidence that red clover is not the only plant which requires long-tongue bees to secure the greatest quantity of nectar.

Daughters of my 23-100 breeder, the prize-winner, and other choice breeders: Untested, 75 cents each; six, $4.00; dozen, $7.50. Select untested, $1.00 each; six, $5.00; dozen, $9.00. Safe arrival and satisfaction guaranteed. Circular free. I am filling all orders by return mail, and shall probably be able to do so till the close of the season.

J. P. Moore, L. Box 1, Morgan, Ky.
31Atf Pendleton Co.

Please mention Bee Journal when writing Advertisers.

26th Year **Dadant's Foundation** 26th Year

We guarantee Satisfaction. What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS. PATENT WEED-PROCESS SHEETING.

Why does it sell so well? Because it has always given better satisfaction than any other. Because in 25 years there have not been any complaints, but thousands of compliments.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

Bee-Keepers' Supplies OF ALL KINDS *****

Very fine pure-bred BARRED PLYMOUTH ROCK Chickens and Eggs for sale at very low prices.

Langstroth on the Honey-Bee—Revised,
The classic in Bee-Culture—Price, $1.20, by mail.

BEESWAX WANTED at all times.

DADANT & SON,
Hamilton, Hancock Co., Ill

Please mention Bee Journal when writing.

Root's Goods in Chicago.

The business for many years conducted by George W. York & Co., at 144 E. Erie St., as agent for The A. I. Root Company's Supplies, is this day transferred to The A. I. Root Company, to be conducted as a Branch Office. All outstanding accounts will be paid George W. York & Co.

The policy of Branch House will not be changed. We shall continue to serve the interests of bee-keepers to the best of our ability, and to increase our facilities whenever possible for such service. Mr. York will still be in the same office with us, and the benefit of his years of experience with this trade will thus be available.

Please note change of name to avoid confusion in our work.

Oct. 1, 1903. **THE A. I. ROOT COMPANY.**

All orders, remittances, inquiries, etc., should be addressed to The A. I. Root Company, 144 E. Erie St., instead of George W. York & Co.

◆

STATEMENT BY GEORGE W. YORK & CO.

TO OUR CUSTOMERS AND FRIENDS:

In transferring back to The A. I. Root Company the bee-supply business which we took over from them some years ago, we do so with regret, as we have labored to build up a large and honorable trade in bee-appliances, and value beyond expression the generous patronage accorded us during the years. We trust the same will be continued to our successors in the business.

Please note that this transfer does not in any wise affect our publishing the American Bee Journal, or handling bee-books and queens. But we expect from now on to be able to devote more time to the Bee Journal, as for years we have had "too many irons in the fire" to give it the attention it requires.

GEORGE W. YORK & CO.

Chicago, Ill., Oct. 1, 1903.

AMERICAN BEE JOURNAL

43d Year. CHICAGO, ILL., OCT. 15, 1903. No. 42.

WEEKLY

THE LATE G. B. LEWIS, OF THE G. B. LEWIS CO.
(See page 660.)

☞ LOOK AT YOUR WRAPPER-LABEL!

Personal to Our Subscribers!

CHICAGO, ILL., Oct. 6, 1903.

We have just been informed by the Post-Office Department that **expired subscriptions** to a newspaper or magazine do not constitute legitimate subscriptions so as to maintain the second-class rate of postage, but if such **are** mailed with paid-in-advance subscriptions it places the whole edition under the third-class rate, which, in the case of the American Bee Journal, is about 14 times higher than the second-class rate. In other words, if the third-class rate of postage were enforced on the Bee Journal, we would have to raise the subscription price to $1.50 a year at once. This we do not want to do. But we are compelled to show that every subscriber who gets the American Bee Journal is a **paid-in-advance subscriber,** in order that all may be mailed under the second-class rate. And the only way we can do that is for each one now in arrears to pay his or her subscription, not only what is past due, but also an advance subscription.

In order that **ALL** who are in arrears may put their subscription credit in advance **right away,** we wish to make the following offers:

We will credit any subscription sent us—1 year for $1.00;

2 Years for $1.80; 3 Years for $2.50; or 5 Years for $4.00.

Of course, these prices are not limited to those who are in arrears, but if any others wish to take advantage of them they may do so.

Very Special Notice to those in Arrears.

In order to comply with the requirements of the Post-Office Department, we will be obliged to discontinue sending the Bee Journal to all who are now in arrears on their subscription. We know this is a very sudden notice, but it is not our fault, as this is the first chance we have had to say anything about it since **we** learned of it from the Post-Office Department.

But all who are in arrears can easily start a remittance to us in time so that it shall arrive at our office before the end of this month, and thus it will not be necessary to miss a single copy of the old American Bee Journal.

We are planning some great things for our readers for 1904, any one of which will well be worth the yearly subscription price of the Bee Journal. But by paying for 5 years at one time, it will cost you only 80 cents a year. That is only a trifle over 1½ cents per copy!

Let us have a prompt response from all who are in arrears, and also from those who will soon be in arrears, so that all our readers may continue right along without a single break.

It may be that some can also send along the names of one or more new subscribers with their own renewals, and thus help increase our list of readers. We are offering some handsome premiums for such work.

Trusting that all our readers had a good year with the bees, and hoping that we shall be favored with a general response by way of paid-in-advance subscriptions, we remain,

Yours for the best bee-literature,

GEORGE W. YORK & CO.,

144 & 146 E. Erie Street, CHICAGO, ILL.

☞ P. S.—If your wrapper-label reads "dec02" it means that your subscription expired with December, 1902; if it reads "jun02," it expired with the end of June, 1902. And so with any other month and year that may be shown on your wrapper-label.

AMERICAN
ESTABLISHT IN 1861
THE OLDEST BEE-PAPER IN AMERICA
BEE JOURNAL

43d YEAR. CHICAGO, ILL., OCT. 15, 1903. No. 42.

Editorial Comments

Late Once in 20 Years.—So far as we can recall, for the first time in 20 years the American Bee Journal was not mailed last week on time, or at the regular time. It was just two days late in leaving our office for the post-office. But it was no fault of ours. We sent the forms to press on Monday morning, Oct. 5, at the usual time, but just as it was all ready to be printed, the press-feeders went out on a strike. The firm who does our press-work then tried to get some other printing firm to print it, and finally succeeded; but that firm was also handicapped on account of the strike, so that it was almost impossible to finish it at all last week. However, on Saturday (instead of Wednesday) we got the last of the copies, and rushed them off to the post-office, after wrapping them.

We regretted the delay very much indeed, as we had made a fair record for promptness in getting out the American Bee Journal every week for many years. But our subscribers will now know the reason why it could not be mailed on time last week, and doubtless will hope, with us, that it may be another 20 years ere it need be late again.

Peculiarities of the Past Season.—Over a considerable scope of country there has been an abnormal amount of swarming, and that, too, with an unusual honey-flow. Hot days, and especially hot nights with prevalent sunshine, are considered the proper thing to accompany a heavy honey-flow; the best time for storing being just as farmers begin to complain of drouth; this year the flow seemed to go right along with cool, cloudy, and damp weather. One of the veterans, who had an unusually heavy harvest, reported:

> "When bees are crazy over a big harvest you can do pretty much what you please with them without fear of being stung; but this year breaks the rule; I never had such cross bees in my life."

To the question whether he had not worked into a cross strain of bees, he replied:

> "No, it happens that I have pretty clear evidence on that point. The crossest colony of this year had a queen four years old; the blood in that colony ought to be the same as in the preceding two or three years, yet in those years that colony never distinguished itself for crossness."

Foul Brood and Wild Bees.—It has been a discouraging thought that no matter how careful one might be in one's own apiary, there was always the fear that foul brood might be lurking in trees occupied by wild bees in the vicinity. General Manager France speaks reassuring words with regard to this, saying that we need have little anxiety, for whenever a diseased wild colony dies out so as to leave its combs and remaining stores a center of infection, the squirrels, and perhaps other things, promptly clean out all that is left to do harm.

National Bee-Keepers' Association—Its Province.—Never in the history of the Association has there been such a rapid accession of members as at the present time. There is no good reason why this should not continue. Indeed, if bee-keepers were not blind to their own interests there would be a membership many times as large, for *every* bee-keeper in the land should become a member.

It is not well, however, that there should be any misapprehension on the part of recruits. There have been those who seem to have thought that they could wait outside till some trouble occurred, and then the Association would stand ready to receive them with open arms to take up their fight for them. A very little thought will show the absurdity of such a thing. It would be much like a man living without any fire insurance until his house was burning, and then expect to have the loss made good by a company in which he would insure after his house was in ashes.

Neither should it be understood that a member of the Association is at liberty to foment trouble, get into all sorts of quarrels with his neighbors, and then complacently folding his arms sit back and say to the Association: "There, now, I've stirred the thing up good and hot; you go ahead and finish the fight." It must be remembered that justice is not necessarily always on the side of the bee-keeper, and it would be a sorry thing to have a combination for the support of injustice.

Let each member do all in his power to keep in peace with the world "and the rest of mankind," and then if the attempt is made unjustly to oppress him, he may confidently rely upon aid from the Association to such an extent as seems right in the judgment of its officers.

A Great Swarming Year has been the year 1903, in certain portions at least. Many report excessive swarming, and stray swarms seem to have been flying through the air in all directions. It is well known that the Dadants have heretofore had very little swarming, not to exceed 5 percent. This year C. P. Dadant reports a perfect avalanche of swarming; and this with an exceptionally heavy yield of honey.

It has generally been understood that when bees begin to store heavily they give up all foolishness in the way of swarming, and devote all their energies to saving the precious flood of nectar. This year it seemed to work the other way—the more they gathered the more they swarmed.

Will we ever learn any definite laws by which bees are governed?

Take Sections Off.—Here and there will be probably still found supers of sections on the hives, where all storing has ceased. Perhaps a super was put on late, and the bees have not begun work in it at all. The bee-keeper thinks there is no immediate hurry, there is no honey in the sections, and so it goes on day after day, with the thought that so long as there is little or no honey in the sections they may as well be on the hives as elsewhere. A serious mistake, for in most places there will be propolis varnished over the comb or foundation to such an extent that the appearance is marred, and if the case is bad enough the bees will refuse to accept such sections the following year. If any beginner still has sections on the hives where the the bees are not storing, let him lose no time in hurrying them off.

Formaldehyde, as a destroyer of the spores of foul brood, is still on trial. Cases are reported in which it has seemed effective, but so long as there are others in which growth of spores occurred after treatment, it will hardly do yet to place entire dependence on the drug. The question now is, whether the cases of failure were due to the inefficiency of the drug, or whether something different in manipulation might have produced different results. It is asking a good deal of any disinfecting agent to dig down into the bottom of a cell filled with pollen and honey, and there destroy a thing so tenacious of life as a spore of bacillus alvei. Can formaldehyde gas do it?

Sketches of Beedomites

GEORGE B. LEWIS.

A short time ago we received the following notice from the G. B. Lewis Co., of Watertown, Wis.:

GEORGE W. YORK & Co., Chicago, Ill.—

Gentlemen:—We have just discovered that through an error you were not advised of the death of our president, Mr. G. B. Lewis, which occurred June 11, 1903. We herewith enclose newspaper clipping.

Yours truly, G. B. LEWIS Co.
Per G. C. L.

The clipping referred to in the above reads thus:

George Burnham Lewis, a prominent manufacturer and business man, president of the G. B. Lewis Co., died at his home shortly after 9 o'clock last night. His death was not unexpected, as he had been in a dangerous condition several days. Hardening of the arteries was the primary cause of his death.

Mr. Lewis was born in Moreau, Saratoga Co., N. Y., July 5, 1832. He received an education in his native city, and when a young man of 21 came West, reaching this city in 1853, where he remained during the summer visiting with his brothers who had preceded him here. He returned to New York in the fall, and shortly after was married to Miss Sarah J. Ingalsbe. Mr. Lewis tried farming for awhile, but his thoughts reverted to Wisconsin, and in 1861 he removed to this city, and has lived here ever since. In company with his brother, R. E. Lewis, he purchased the water-power on the west bank of Rock river, then owned by a man named Salsey. The firm name was then R. E. & G. B. Lewis, and after sawing up the logs which were purchased with the mill and water-power, the firm engaged in the manufacture of sash, doors, and blinds. In 1870, R. E. Lewis retired and G. B. Lewis became sole owner, and conducted the business until 1878, when the firm of Lewis & Parks was formed, and upon the death of Mr. Parks, his son-in-law, the firm became known as the G. B. Lewis Co., one of the largest manufactories of bee-keepers' supplies in this country. From a small beginning the business of the firm increased rapidly under his guidance and management, until it became one of the largest of its kind, with a manufactured product which sells all over the world.

Mr. Lewis possessed a quiet and amiable disposition, and was a man of integrity. In his business and social life he displayed those characteristics which are so much admired, and those who had occasion to have business or social intercourse with him always had a kind word to say in praise of his many good qualities. Mr. Lewis never aspired to political honors, preferring the quiet of his home. For the last 20 years he has passed the winter months in Dunedin, Fla., where he has large property interests, and it was while there, early this spring, that he was taken sick. He returned home in April, and has gradually failed in health until released from earthly suffering by the hand of Death. By his death Watertown loses one of its oldest and most progressive business men, and an honorable citizen who always took pride in his home city, and helped in its upbuilding. He will be sadly missed from the family and home circle, and by his many friends and acquaintances here and throughout the State.

His widow and two children, Mrs. L. L. Parks and George C. Lewis, of this city, survive.

Verily, the leaders among bee-keepers and bee-supply manufacturers are passing away. It was not our pleasure to have a personal acquaintance with Mr. Lewis, though, of course, we have had business relations with the firm of G. B. Lewis Co. for years. And it was always satisfactory in every way. That company has been represented in our advertising columns for over 20 years, we believe, and, so far as we know, their dealings with our readers have always been mutually pleasant and profitable.

The fact is, the G. B. Lewis Co. is one of the strong, clean, business-like bee-supply manufacturers and dealers of which all beedom should be proud. We understand all of that was characteristic of Mr. George B. Lewis. And that same honorable dealing is continued by his son, Mr. George C. Lewis, who has been manager of the business for years. We wish the firm continued success, although the honored President has been taken away permanently.

Why Not Help a Little—both your neighbor bee-keepers and the old American Bee Journal—by sending to us the names and addresses of such as you may know do not now get this journal? We will be glad to send them sample copies, so that they may become acquainted with the paper, and subscribe for it, thus putting themselves in the line of success with bees. Perhaps you can get them to subscribe, send in their dollars, and secure for your trouble some of the premiums we are constantly offering as rewards for such effort.

Miscellaneous Items

SUNDAY IN CALIFORNIA.—In the first few paragraphs of the report of the Los Angeles convention, reference was made to the Sunday-school of the First M. E. church of that city. We had read and heard so much about that school previous to leaving Chicago, that we decided to visit it if we ever should be in or near Los Angeles on Sunday. So the coveted opportunity came on Aug. 23.

As mentioned last week, we spent Saturday night at Pasadena. So, we arose early Sunday morning and prepared to take the electric car ride of some 10 miles to the church mentioned in Los Angeles. As the Sunday-school begins at 9:30, it was necessary to move lively for a Sunday morning.

We arrived just a few minutes before the school was opened by Dr. H. W. Brodbeck, the dentist brother of George W. Brodbeck, of whom we have spoken before. He has been the superintendent of the school for 11 years. He has it well organized, and everything running perfectly. One of the assistant lady superintendents very courteously showed us, and about a dozen other visitors, around through the various departments of the school. This was appreciated by all thus favored.

The bee-keepers present were, Dr. C. C. Miller, A. I. Root, O. L. Hershiser, W. F. Marks, and F. E. Brown, besides the writer. If we mistake not, each of those mentioned attends the church of a different denomination excepting us, and yet all seemed perfectly at home in our Methodist school.

Dr. Brodbeck may well be proud of his excellent Sunday-school. It has an orchestra of about 30 instruments. Just think of what harmonies they can produce! It is an inspiration to any superintendent or school to have such an orchestra. It also has an efficient corps of officers and teachers—"each one an expert."

The school has enrolled about 1000 members. It has perhaps the best system of records known. Dr. Brodbeck got it up himself, so it ought to be a good one.

After the study of the lesson, Dr. Miller and A. I. Root were invited to speak to the main school, while we were asked to say a few words to the members of the young men's and young ladies' classes, which have their closing exercises together. There were probably 150 present on that occasion. How we wished we could have known enough to be equal to the opportunity. Who wouldn't give a great deal, if he had it, to be able to interest such an audience, even for a short time?

We believe both of these large classes were taught by ladies. Think what it means to hold the attention of a hundred or more young men every Sunday, and interest them profitably!

We can say we felt well repaid for making the effort to visit one of the greatest Sunday-schools in all the West.

After the close of the school, we bee-keeping visitors all went across the street to hear Robert J. Burdette preach. He has left the lecture platform, and is now the pastor of the Temple Baptist church in Los Angeles. He gave a splendid discourse. But we couldn't help feeling that the lecture-field needed him more than the pulpit.

By the way, we understand Mr. Burdette, several years ago, married a very wealthy lady, who resides, and owns a palace, in beautiful Pasadena. We passed by that lovely home with its gorgeous flowers and restful greenswards, when "Seeing Pasadena" the following day.

On Sunday evening we attended the First M. E. church of Pasadena. The building and interior finishings and furnishings were simply superb. It is a Methodist cathedral. It cost something like $100,000, we believe. Too much for any church. We believe in less pretentious church buildings, and more of them scattered throughout a city.

The organ and music in this particular Pasadena church was grand. The audience was large and attentive. The talk by the pastor was helpful. He stopped when he got through. Not every speaker can do that. Their "terminal facilities" are not always what they should be. But those Pasadena Methodists ought to be a happy and thoroughly good people. We suppose they are. We certainly saw no reason to be doubtful about it.

Judging from what we saw and heard on that one Sunday, in Los Angeles and Pasadena, we should say that not a few of their people attend church.

On returning to the home of our cousin, Mrs. Otto Freeman, after the evening service, we were quite ready to retire and get a good rest for the following day, which was to be the last of our stay in "Sunset Land."

Next week we will give the last installment of these rambling notes. It will be Pasadena and homeward bound. Both delightful to contemplate.

Herbert Clute, a bee-keeper in Chippewa Co., Wis., reports a crop of 37,000 pounds of extracted honey taken from 333 colonies the past season.

Herman L. Gloege, of Green Co., Wis., called on us last week. He reported 112 colonies, and a harvest of about 4500 pounds of honey, mostly comb.

A "Fowl" Bee-Man.—We notice that one of the foul-brood inspectors has envelopes and letterheads with "Fowl Brood Inspector" printed on them. That's pretty rich. First thing that inspector knows he'll be taken for a "chicken-lifter."

Mr. Hasty has a very just complaint against the proof-reader. On page 633, he wrote about the bee flourishing her *ligula*, and we got it, "flourish her liquid." He wants to know what we think about that. Well, we think it was a bad break on the part of this paper. The promise is to try to do better in the future—if forgiven this time!

General Manager N. E. France reports as follows on the present membership of the National Bee-Keepers' Association:

> 990 members enrolled when he took hold less than a year ago.
>
> 569 new members enrolled during his term thus far, or an average increase of 81 members per month.
>
> 1559 was the total enrollment Oct. 5, 1903.
>
> 175 memberships at that time had expired, and should be renewed at once.

We consider the foregoing an excellent membership report. The increase has been very encouraging, indeed. But there should easily be enrolled a membership of 2000 before the next annual meeting of the National. Why not?

N. E. France, the well-known inspector of apiaries for Wisconsin, has lately been out on his inspection work, concerning which a local newspaper in Clark County had this to say:

> N. E. France, who has been in this vicinity recently, reports that honey-producers in this part of the State are selling their extracted honey at a lower figure than they need to do, many of them letting it go at 6 cents, when they might have at least 7 cents. The crop in Wisconsin this year is estimated at 3,000,000 pounds, which would take 150 freight-cars to move it. Mr. France was here the last of July and found foul brood prevalent to a considerable extent. He gave instructions for treating these affected colonies, and in one instance tried the experiment which has been widely recommended in bee-papers, of using formalin gas. He found on this last visit that all colonies were free of disease except the ones treated with the formalin gas, some of the combs still being affected. This yard is quarantined until spring, when Mr. France will be back and personally treat the disease.

Mr. France writes us that the experiment mentioned above was with 200 combs, all being fumigated with formalin gas, using double Weber's amount of gas or formalin, Weber's lamp, etc. All were afterward put in clean hives, and bees put on them. Every colony became re-diseased.

Wisconsin Bears still like honey, if we may judge from the following taken from a recent copy of a Greenwood, Clark Co., newspaper:

> Bears are getting rather numerous around bee-yards in this section. Nearly a couple of weeks ago a bear visited M. H. Wright's apiary on the Eau Claire river three different times, and was shot at by the owner without success, on account of the darkness. Finally, Mr. Wright got near enough to Mr. Bruin to see him cuff the tops from the hives and take out a section of honey, and when he stood up to eat it, he was enabled to get a line on him by lying on the ground, so as to get the bear between himself and the sky line.
>
> At Severson's Popple river apiary a bear, or bears, have broken into a dozen or more hives, and some of them have been completely demolished. So far the mischief-makers are at large, they doing their work at night when it is hard to see them to get a shot at them.

So it seems that Wisconsin is still on the frontier, and wild game abounds. We supposed that Sir Bruin had passed on from Wisconsin, but he seems to get around in time to help unload the honey from the hives. But Mr. Wright got some of Mr. Bear's tenderloin, all right. Wonder how it tastes when made out of honey! Ought to be doubly sweet and palatable.

Convention Proceedings

THE LOS ANGELES CONVENTION.

Report of the Proceedings of the 34th Annual Meeting of the National Bee-Keepers' Association, Held at Los Angeles, Calif., Aug. 18, 19 and 20, 1903.

Continued from page 648.)

Dr. Miller—Before that question about the queens is entirely passed, I would like to ask a question. Suppose, Mr. McIntyre, that you had a hybrid queen and the colony gave you an exceptional yield, away beyond anything else in your apiary and you never expected to sell a queen in your life, would you breed from that queen?

Mr. McIntyre—That is a pretty hard one, Doctor. I can answer that in Dr. Miller's own language—"I don't know." [Laughter.]

Mr. Hyde—We have with us another extracted-honey producer, Mr. Dadant, and I am sure we would all like to hear from him.

C. P. Dadant—I feel like saying something in regard to the cold knife. We have tried both the cold and hot knife, and have stayed by the cold knife. There are times, however, when it is impossible to uncap honey with a cold knife. In the fall of the year, in our neighborhood, it is pretty cold at night, and after the honey is off the hive a little while it gets cold and thick, and the knife, instead of cutting, breaks the comb. Now, when it is fresh from the hive and warm, the cold knife will do splendidly. I think when combs are not off the hive too long, and are warm, the cold knife is all right; but you let them rest awhile, and the honey gets thicker, you will have to use a warm knife. I would not recommend extracting the honey when the combs are cold. It is much more difficult to uncap it, and much more difficult to extract the honey. We always extract the honey as soon as it is off the hive, for, when it gets cold, it is much more difficult to handle, and, of course, a man who extracts a good deal must consider all these things.

Prof. Cook—I would like to hear from Mr. Dadant on the question of the hybrid queen for breeding purposes.

Mr. Dadant—I think we have just as good queens among the Italians as among the hybrids.

Dr. Miller—But the condition is that you have one that is superior to anything else in the apiary.

Mr. Dadant—Well, in an impossible case we could have impossible results. [Laughter.]

Dr. Miller—More than once I have had hybrids that were superior to any of the pure ones.

Mr. Dadant—I have heard more comparison between Italian and Cyprian. I have had Cyprians, quite a good many. I have noticed one thing which perhaps some of you may not have noticed. There are exceptions to all the rules, however. The mating of a cross Cyprian queen with a drone from the quiet Italian colony will produce a mild and gentle type of bees, the moral qualities coming from the male, while the other qualities come from the female. These seem just as quiet to handle as pure Italians. But take the Italian queen and cross her with a black drone, and you have the crossest bees, unless it is the Italian queen crossed with the Cyprian drone. I think, as a rule, it will prove to be so, that the mating of a quiet race on the drone side will produce quiet bees.

Albert B. Mellen—Will Dr. Miller please tell us what he would do about breeding from a hybrid queen that excels all others in *his* apiary?

Dr. Miller—To get even with Mr. McIntyre, I would better say, I won't tell. I will tell you what I have done. The colony that produces the largest yield of honey this year will be marked, and most likely be bred from next year without any regard to stripes or color.

Frank Benton—The question is, How to make money producing extracted honey? Now, of course, all of these points, as to the use of the hot or cold knife, the super with shallow combs, or deep combs, and so on, all come into consideration; also the question of bee-escapes. All these are mechanical points, you may say, things that will settle themselves for each man. But I do not think Mr. McIntyre brought forward strong enough some large points—vital points—as compared with these. The question is how to get a large quantity of honey. Now, I believe we are losing tons and tons of honey by prejudice against certain strains or types of bees. A man that produces 20 tons of honey might produce 30 if he had the right kind of bees to gather it; and where he is producing 20 tons of honey he can increase that by half by care in the selection of his bees. The right bees for the locality, and the right queens, might enable him to gather an added 50 percent.

Now, I will come down to the particular point I wish to bring forward. The Cyprian bees possess more energy than any other race of bees I know of. I handled them for years in the Island of Cyprus, extensively there and also in other countries. They have a disagreeable stinging trait. Their tongues have been measured by a great many different people. I have done something in that direction which has been confirmed by others. Their tongues are the longest of any bees—at least, as long as any of the Eastern races, and longer than any other European types. They can fly farther, have greater wing-power in proportion to the size of the bodies. There is large wing-spread that has come through centuries of dwelling in the Island of Cyprus. I think it wrong to reject that type of bees, because they possess more power in transmitting their race or progeny than any other race I know of. With this element we should not ignore a strong-wing quality, and the fact that they are among the most prolific of European races, or beyond any type whatever. Of course, we want a bee that we can handle, and that brings the difficulty.

We have in Austria a type extremely gentle. Another type in southeastern Russia is an extremely gentle bee. Both of these bees are prolific; both of them good honey-gatherers.

Now, confining myself more particularly to the Carniolan—the bee of Europe—this is the hardiest bee that I know anything about. If we can eliminate some of its poor qualities and unite it with the Cyprians, we would have the ideal bee. I conceived that notion some 15 years ago, that we might, by crossing these bees, get the good qualities of each combined. While I was in Munich, Germany, I had sent a large number of Cyprian bees, that had been mated there, back to me. I tested them in that raw region, nearly 2000 feet above the sea-level, and I found them superior to any others we had there. I have printed the results of these experiments in some circulars which I have brought with me. Two years later I went to Austria and took with me a pure Cyprian queen, and had that mated to Carniolan drones. The same experience came to me, but not content with that, still I have followed down many and various crosses between these two races since then up to the present time, sometimes a large number and sometimes a small number. I have sent these bees into different regions of this country, where the winds are high, and where it is important to breed up rapidly in the spring, particularly. Where alfalfa, the first crop, would be an important item, people have told me that these bees with this blood increased their honey-yield, and increased their colonies at the same time very materially. Some have said they doubled their colonies. I am merely calling attention to what we are losing by rejecting these bees on account of their color, etc. Mr. McIntyre did not like to cross these bees; they would be rejected because they are hybrids, but would produce bees that would be acceptable on account of their color. Are they not just as much hybrids?

Now, it is just as easy to breed Carniolans that have yellow stripes on them. I have traveled all over Carniola, and have never seen a single colony there where there were not some yellow-banded bees, and I conceived the idea that a grey-colored bee with yellow queens would be very nice to have, and before my departure from that province I selected a set of yellow queens that would produce entirely grey workers, and the tendency was to have the yellow crop out on the workers. I tried to avoid that, but you see it would be to produce yellow Carniolans, and we would not have those hybrid bees, would we, because they are all yellow? Now, that cross-bred bee is not cross. It is amenable to smoke; it has the energy of the Cyprian, the prolificness of the Cyprian, and the hardiness of the Carniolan. We have, therefore, all the really good qualities and important qualities of the Cyprian, including their great wing-power and their energy, their disposition to fly farther, their long tongues, and the hardiness of the Carniolans. By continuing to mate pure Cyprians to the pure Carniolans, I think a constant type could be established, and I find that is preferable to an unfixed type. I find in the spring, when the wind is cold, and many of the bees that leave the hives will drop down on the ground, these cross-bred bees, these hybrids, will actually get back into the colonies, and will fly strongly when others do not dare venture out, and they will gain something. The bees that do not get back into the hive will make a great difference in the honey produced. Coupled with all these other qualities, I am prepared to say that with all my experience of 11 years in foreign countries, and some 30 years since I began handling bees, I have not found anything to excel these bees. I believe the most important point in the production of honey is care in the selection of strains or types of bees.

Secondly, I requeen in the latter part of the year. I take pains to see that the new queens are bred from the very best queens I can produce. I select only large, prolific queens. I want those that will produce 20 to 25 queens to the brood. With these, I believe, we have gotten the two most important points in the production of extracted honey.

J. K. Williamson—Several years ago I put about 30 Carniolan queens into the apiary for Mr. Wheeler. My partner and I afterwards bought that apiary. The Carniolan queens, perhaps, were mostly superseded before we bought it, but the nearest Carniolans in the apiary after we got it were the bees that brought in the biggest amount of honey.

H. H. Moe—I would like to ask Mr. Benton how many queens he rears out of a good, strong colony—how many cells does he start?

Frank Benton—Well, I sometimes start 100 in a colony to get good, well-developed queens. I have seen in the hives of some of these Eastern races of bees, where they had prepared sometimes as high as 250 cells, nearly all producing well-developed queens. It is a mistaken idea to suppose a large number could not develop. Simply because our Italians and blacks do not produce a large number is no reason why we should not get them. I do not hesitate to rear anywhere from 50 to 100. I would not hesitate to rear 200 if I had a powerful colony.

Mr. Hyde—My views are the same. We have at present five or six different strains, and we try to find out which are the best for all purposes. Cyprians are good bees for honey, but we can not stand the temper. Our men do not like to work where they are liable to be stung so often. We have decided to use nothing but Holy Land bees for our purposes.

Frank Benton—I may say I spent a good many days in apiaries in Palestine, and at the same time I had an apiary of over 200 colonies in Cyprus, and worked most of the time handling these bees with perfect impunity, while in Palestine I had to use clouds of smoke. Now, Syrian bees and bees of Palestine differ very much, and in the first importations brought to this country, in 1880, these two races were mixed, badly mixed, and the term "Holy Land" now covers them both. They differ considerably, and in temper are far inferior to the Cyprians. An occasional Cyprian colony shows as bad temper as a large number of bees of Palestine, but, all in all, the Cyprians are decidedly better tempered than these Holy Land bees. Where that does not hold good, the Cyprians have become hybridized, and likewise the Holy Lands, and this has brought in the gentle element. I have tested that.

Mr. Hyde—I would like to say that Mr. Benton must have gotten his from a different source than that from which we got ours. They are very gentle bees. I think they are as gentle as Italians; that is, pure Holy Land bees. I am not talking about something mixed up with Cyprians.

Mr. Benton—I think you got them from Mr. Baldensperger, in Jerusalem. That is where I established an apiary myself—that very apiary. Further, I have had constant experience with these bees for years, and I have been in his apiary and traveled near them, and moved all their colonies, some 600. They were supplied to me all the time I was in the East, afterwards when I was in Munich, Germany. It is just possible that you got a gentle type of that bee. By the side of it you may get fierce ones. The same thing may occur, perhaps, with the Cyprian, though, perhaps, in four cases out of five you will get rather easily managed ones, while, in the fifth, rather fierce ones.

Mr. Hyde—I would like to say that I got my stock of Cyprians from Mr. Benton! [Laughter.]

Mr. Delano—I had 200 colonies in one location and decided to move half away. The 100 I moved away were so cross all that season that I could not go near them, nor any one else, unless fully prepared to do so, while the others in another location were not cross. Why was it? These were all reared from the same queens. I think the blood has nothing to do with it.

Frank McNay—I think there is a good deal in location. I have had the same experience as Mr. Delano. We moved a portion of the apiary a number of miles away, and they were so cross all the time they were there it was almost impossible to handle them. On returning them to the same apiary they were as gentle as the others. I think the location has a great deal to do with it.

A Member—My question was, Is it not always the case that an apiary that is moved to a new location is generally cross for awhile, or for the whole season?

Mr. McIntyre—Not always. If they are getting plenty of honey they will soon get over their crossness. Generally, when I move it is when they have plenty of honey, and they soon get over their crossness.

Mr. Andrews—That has been my experience, exactly. After the oranges gave out this year my son and I moved 150 right over to the buckwheat fields. They began working right away, and 82 we had in one place were moved twice, and they were better-natured than when working in the orange flow, only a few miles move. But if they are not getting much honey, and it is hard to get what little they do get, it is very likely they will become cross.

Mr. Corey—I don't think Mr. Mendleson's bees stay in one place long enough.

(Continued next week.)

Contributed Articles

Putting Back Supers After Extracting.

BY C. P. DADANT.

> Will you kindly pardon me for asking a question in regard to bees cleaning out the supers after extracting? I have read in your writings (I think it was in the American Bee Journal) that you give the combs, after extracting, in the care of the bees until cool weather comes and the time of storing them away. I tried that way last fall, and when I took them off I found some honey in every frame, and a great many of the empty cells sealed over. I run the combs through the extractor again and gave them back to the bees, but they failed to empty them. They would store what honey they found right in those cells, and I had to store them as they were. Some of the honey granulated, and in spring some of the honey was sour. I had to use them as they were, and I fear that I will have honey that will not keep.—J. S. HAAG, of Iowa.

We have had one or two experiences of that kind—just enough to know that those things rarely happen. You have evidently extracted your honey before the crop was fully ended, and the hives must have been very full. If the colonies are supplied with all the combs that they can possibly fill, they will not put so much honey in the hive-body that they have no room for the very last few pounds that are harvested. A point may even be reached when it will be necessary to crowd them for space in order to get them to place enough honey in the body for an abundant winter supply. But if the crop is long protracted, and the weather is warm, the colony strong in bees, and heavy with stores, the bees will often ascend in those supers and stay there. It becomes necessary, when removing the supers for winter, to brush or drive almost the entire colony out of those supers. This may be avoided by extracting late, say a few days after the first frost.

Then, in putting the combs back, do not place the supers directly over the uncovered brood-chamber, but use the enamel cloth, if you use one, or a perforated honey-board, or a burlap cover, between the supers and the hive-body, leaving just enough space so that they may go back and forth. This partition will make them feel that the supers are too remote from their brood to stay on them, and they will carry the honey down, if there is any room at all to place it.

The amount of honey left in the supers after extracting, if it has been properly done, should be very insignificant, and ought to find a place in the hive-body without any difficulty.

As to the bees sealing empty cells, we have seen that also; it is a freak for which it is difficult to account. They may do it because they have an excess of broken fragments of wax which they dislike to throw away, but in an experience of some 35 years, we have seen this but once or twice.

The fact that honey, which is left sticking to the combs after the extraction, is apt to sour is our reason for putting all the supers back on the hive at all times after extracting. There are many people who do not follow this practice, but who retain their supers, with the honey sticking to them just as they are after extracting, until the following spring. In a discussion of this matter in the Revue Internationale, of Geneva, it was found that the opinions were about equally divided on the subject, and those who did not return the supers to the hives held that the honey kept just as well in that condition as if it was gathered up by the bees. Perhaps there is a difference owing to the climate. In the Mississippi Valley we have very changeable temperature, and even late in the fall we may have weather favorable to the development of fermentation. Besides, during our damp weather the honey that is spread over the surface of those combs becomes watery, and much more liable to the effect of fermentation germs.

To remedy the trouble mentioned, I would recommend that you extract your honey after the first frost, and if the colony is strong, separate the brood-chamber from the upper story, as mentioned above. I would not under any consideration follow the methods of some apiarists, who put the combs out in the open air for the bees to clean. It teaches the bees to rob, and when the combs are not where all the bees can get at them, they tear them up mercilessly in their haste to get the honey away. Robbing bees are as unreasonable and merciless as human robbers.

If the extracting is done too late, and the bees have no warm weather to enable them to occupy the supers sufficiently, the conditions will be still more unfavorable. In this locality we are successful in getting our combs all nicely cleaned before cold weather, if the extracting is done early in October, and the supers returned the same evening. Usually within two days all will be in order. Yet we do not remove the supers until November, because we have once or twice noticed some moth-growth in combs that were too early taken away from the bees. If the combs are kept in a cold room—that is, a room without fire from November till May—there will be no moth in them. The cold weather evidently destroys the moth in whatever stage they may be.

A CROP-REPORT ERROR—TIME TO STOP.

A clerical error crept in my article on page 518. I reported a crop of 200 pounds per colony, and either the typewriter or the typesetter made it out 300 pounds. The crop was large enough with the true figures, and I only wish we could have such crops a little oftener.

In his three-column reply to me, Mr. Arthur C. Miller accuses me of resorting to "sophistry." When in an argument one of the contestants advances unpleasant epithets against his adversary, it is time to stop. Honey too much diluted changes to vinegar. Hancock Co., Ill.

Handling the Larvae and Royal Jelly in the Doolittle Method of Rearing Queens.

BY A. C. F. BARTZ.

MANY of the readers of this journal undoubtedly remember the fierce queen-rearing battle which took place in these columns between the queen-breeders and some of the contributors in general, and many and heavy were the shots fired from either direction, and some very important questions were settled for ever, if I am not mistaken.

But "not by a long shot" do I believe the queen-rearing question entirely settled. The umbilical-cord theory was pronounced nonsense, proved to be such, and disposed of. But there are other questions still unsettled, and it is for that reason I venture to take up the matter anew in these columns, if the editor permits me to do so, and I believe he will, for he himself is of the opinion that the queen-bee is the "main spoke in the wheel," or, in other words, the foundation of a colony of bees.

Mr. Alley says, in part, let us have a quiet discussion on queen-rearing. All right, Mr. Alley, here we go!

I believe it is now accepted in general that naturally-reared queens are the best ones obtainable, but are believed to be too expensive, and the supply so inadequate to the demand, and consequently artificial means have been resorted to.

Now, there are two principal artificial queen-rearing methods before the bee-keeping public, viz.:—the Doolittle and the Alley. Not knowing very much about the Alley method, I shall confine my discussion principally to the Doolittle plan now.

The practitioners of the Doolittle method know it is necessary to dip royal jelly from one queen-cell to another, also to transfer the larvæ for the queens. And also knowing that some of the so-reared queens, or a good many of them, do not come up to the standard or expectations, I believe I found the cause of this short-coming the past season.

Last summer, in June (I do not exactly remember the date, but it matters not), I took some queen-cells and a piece of comb with larvæ into the house, as the day was rather cool, and it being noontime there was a good fire in the kitchen. I thought I would rather transfer the larvæ and fix all up there, for the temperature was high, at least 95 degrees F. I put the piece of brood to be used into my clothes, next to my body, to keep it warm, but the queen-cells containing the royal jelly I was not so careful with, but cut them out and carried them in my hands to the house, laid them on the table, and went to work at once dividing the jelly, and putting a portion into each respective cell-cup, *a la* Doolittle; when, after I was done with the job, I took the piece of comb containing the larvæ, that I had kept in my clothing until then, shaved the cells down as directed by Mr. Doolittle, picked up the spoon I had used in transferring the jelly (which I had made expressly for the purpose out of hard maple, one end of which I had made into a curved toothpick, for picking the lavæ out of the bottom of the cells), when, for some reason I do not know, I touched my lips with the spoon I had previously used for transferring the jelly, and which was yet wet therefrom—why, it felt as cold as ice!

At once it dawned upon me why some of the queens reared by this method are inferior, for, if the temperature of the jelly sinks below that of the atmosphere surrounding it, which it surely does, it is no wonder that some of the little larvæ produce poor queens after receiving such a "cold bath" as they would have had in this case had I not discovered the rapid cooling off of the jelly. But mind, it takes a lot of heating in order to raise the temperature of the jelly in the wax-cups to a normal one again. And, therefore, I would caution the beginner to be very careful, if using the method in question, lest he have some poor queens, although it may be a success in the hands of an expert.

I, for one, am in favor of having the queen put the eggs for the queens in the cell-cups herself, without my touching them at all, as the experience I had last summer proves it is a very dangerous thing to do. It seems to me something like taking a half-hatched chicken out of its shell, holding it in my hand awhile, and then putting it back again and closing up the egg and allowing the chick to hatch. I wonder if it would be as strong as if I had never taken it out! I hear some one say, "Oh, well, a queen-larva is no chicken." I know it is not, but both are alike in some respects, at least, and that is in this: They both require the natural course for development, and experiments made show that the temperature of a colony of bees varies but little, however extreme the atmosphere surrounding it may be; consequently, it seems to me that a larva of such tender age can scarcely stand the radical change of temperature to which it is subjected to in the transferring process. It also seems possible that by making some improvements and short cuts a much larger percentage of queens can be reared under the swarming impluse than has been done heretofore.

Some of the readers of the American Bee Journal undoubtedly remember me telling about cutting a brood-comb about half way through the middle and placing the same in a colony preparing to swarm, for the purpose of getting queen-cells built on the lower edge of the comb. Last summer I tried cutting only about two inches off the bottom of the comb, and inserted a stick with dipped cups, *a la* Doolittle, except dipping the entire stick into melted wax, and found the queens to lay promptly in them. But I believe if one would go to the trouble and take away the brood-combs from a colony intending to swarm, and insert several—say three or four combs with queen-cell cups—the queen would lay in them in such rapid succession that nearly all of them would hatch at the same time.

Now, in order that I may not use too much space, I will close and let the other folks have their say.

Chippewa Co., Wis.

Queenie Jeanette is the title of a pretty song in sheet music size, written by J. C. Wallenmeyer, a musical bee-keeper. The regular price is 40 cents, but to close out the copies we have left, we will mail them at 20 cents each, as long as they last.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Queen-Rearing—Feeding Bees—Other Questions

I launched my canoe into queen-rearing recently, and was utterly smashed on submarine snags not yet discovered. Help! help!

I have a "select-tested" queen from a well-known breeder, and her bees are a beautiful yellow, but so small (not more than three-fourths as large as my big, brown bees) that I hesitated to rear queens from her; but I tried, anyway.

I used two Danzenbaker hive-bodies with excluder between, the lower one containing the queen and her brood, the upper one 10 frames of brood from other colonies. I let this stand eight days, then removed the queen and all frames from below, but left almost all the bees. I put 3 frames of young brood and eggs from an Italian queen in the center of the upper story, putting below frames taken from there.

Ten days from removal of queen, just as I was about to go around and break up this colony into nuclei (after spending about a week sawing and nailing on nucleus hives), this colony *swarmed*. This was Aug. 24. On examining the 3 frames given, I found about 12 or 15 little sealed cells, the most insignificant I have ever seen, some indeed barely larger than drone-cells, varying to about an inch in length, and about the size of a lead-pencil around, not one of which I'd think of using. Now, several frames distant, in the same story, there were two splendid cells, out of which queens evidently had emerged. I put those on frames of brood from a black queen given over the excluder eight days before removal of queen.

So endeth effort No. 1.

The following is trial No. 2: I removed the Italian queen and shook nearly all bees from an upper story (which was the one containing brood) of another colony into the hive out of which she came, and the next day I shook nearly all the bees from another strong colony into this hive, for I did not feel sure I had enough young bees (of course, the queens were temporarily removed while shaking was in progress). Although goldenrod was still in bloom, on the third day I fed about three-fourths of a quart of extracted honey because the weather turned cool and cloudy, and continued so for several days.

Now, on the day for forming nuclei, on looking in the hive, I found the same kind of tiny little cells as before. Failure again!

Now for questions:

1. In my first attempt, do you think those bees started out with the idea of superseding their queen, and afterwards found themselves crowded, and decided to swarm?
2. What is the reason the bees would not make larger cells? Do you think the queen, whose bees are so small, is at fault, or have I simply "bungled?" (Don't hesitate to say so—it is not the first time.)
3. Is extracted honey fed without thinning?
4. Why must feeding be done early? Can't the bees ripen honey if the weather is such that they can fly? In this locality there are not many weeks, or even days, in which they can not fly.
5. In wintering out-doors, would entrance-blocks be any advantage? My hives have an inch across the entire front.
6. Last fall I stupidly left a super containing 10 sections of drawn comb on a hive during fruit-bloom; these sections were filled (no other hive had supers then). Now, next spring, if I add supers underneath each colony would the bees store in them if there is any surplus? (Fruit blooms in March and April, and I don't care to disturb sealed covers.) Would it interfere in any way with brood-rearing?
7. Why should hives be exactly level if frames are not loose-hanging?
8. If brood in the same comb hatch into both yellow and dark bees, does it indicate the queen has been impurely mated?
9. Does not hanging out frames for bees to rob cause robbing when not desired?
10. Where does Miss Wilson get her buckskin gloves? and at what price?

I want to hear from the sister about those asbestos gloves, too. MRS. C. D. MEARS.

Princess Anne Co., Va.

ANSWERS.—1. Those bees, no doubt, thought themselves queenless. When brood is placed over an excluder it is not an uncommon thing for bees to start cells. You should have examined the frames and killed all cells at the time you gave the brood from which you wished your queens reared.

2. Now about those small cells, they may, or may not, have been worthless. When queen-cells are started, not on the edge but in the center of the comb, they appear much smaller, often being so flat to the comb as almost to escape detection, and yet good queens may emerge from those same cells.

3. Not usually.

4. In Virginia it does not make so much difference as farther north, still it would be better to feed when the weather was warmer than just warm enough for bees to fly.

5. It is possible that a smaller opening might be better.

6. They would not be as likely to store in them as if they were placed over the brood-nest. But it would do no harm to try, unless it might be to soil your sections. It would not interfere with brood-rearing.

7. The hive should be level from side to side, not necessarily from front to rear. If not level from side to side the combs will not be built in the center of the frames, and there will be the same trouble in the sections.

8. Either there is impure blood in the queen or she has been impurely mated.

9. It may, if care is not used.

10. I got them at one of our stores in Marengo, but have never been able to get another pair like them. I paid $1.00 for them.

I, too, am anxious to hear more about those asbestos gloves.

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, Ohio.

QUEEN COMPELLED TO CEASE LAYING.

In the case of a queen compelled to cease laying, and the question whether there *is* any such compulsion—with its presumptive harms—the probabilities rather look on your side, dear Boss. Page 547.

GLYCERINE CANDY FOR QUEENS.

Had I turned my guessing machine betimes on J. P. Moore's glycerine candy for queens, I should have guessed that it would poison every mother's daughter of them. Nevertheless, success is a very successful article; and after his experience I'll only demand a little verification. Don't go it too strong till others also have found glycerine harmless. Page 547.

CELL-CUTTING TO CONTROL SWARMING.

My Afterthink on the plan of controlling swarming by persistent cell-cutting, is that sometimes it would be quite satisfactory, and sometimes quite unsatisfactory. But hunting cells in overcrowded hives is not pleasant work; and the amount of time required at it will, I think, cause the operator to quit it after a bit, wherever the number of hives involved is more than a dozen. Meekly ready to be informed and corrected by the man who has run 50 colonies through the season that way. Page 547.

1000 POUNDS TO ONE COLONY—PROVE IT!

And now, behold, so reputable a boy as E. S. Lovesy throws his hat into the charmed record ring of 1000 pounds to one colony! I believe a running-at-large impression afflicts a good many of us that 1000 pounds per colony has never been properly proved up yet. Page 548.

TWO DIFFERENT APIARIES.

We will agree with Mr. Wilmon Newell, of the Texas experimental apiary, that running a private apiary for gain and running a public apiary for information are two very different propositions. Page 548.

SHOWER-BATHING A QUEEN BEFORE INTRODUCING.

So it is for the purpose of catching the queen that Adrian Getaz wets her down. Shower-bath. Is it not true that man—bee-keeping man—has "sought out many inventions?" It makes two operations in place of one in catching a queen, and some of us would manage to bungle both of them—douse the water in such a way as to knock to unforeseen regions a bunch of bees, queen and all. Especially the wide-awake queen dodging back and forth around a bottom corner of the frame is likely to be a difficult subject for water-bath. Still, with all the rebates, the resource looks like a simple and useful one for some hands to use. Worth some trial from us all, perhaps. Page 550.

CAPTURED BY A "SISTER."

He didn't know enough to take to the tall timber when the bees chased him home, and the "sister" came and captured him the second time for hiving purposes. For particulars, see page 551.

BEES, UNLIKE DOCTORS, KILL THEIR PATIENTS SOONER.

That colony, page 553, which kills about a pint of its own bees every once in a while, I'll guess it is to cure some disease—paralysis, perhaps. The bee's infallible remedy for disease is to kill the patient and lug him out. Often, I think, they fail to live entirely up to their doctrine; but that is the ideal. Human doctors wouldn't like it—makes the case too short for an exemplary fee.

INTRODUCING WETTED QUEENS IN FRANCE.

So wetting the queen when introducing her is well bespoken by an apiarist over in France. Whatever of hostility the queen brings upon herself by impudent conduct, will evidently be obviated (or, at least, postponed) by a good wetting. I have oft suspected that the queen was to blame herself in very many cases. Page 557.

CARBOLIC ACID AS AN APIFUGE.

"Powerful strong" an apifuge must be to drive the bees out of a super in a few minutes merely by the vapor from a wet rag, and no forced current of air. As it is no more surprising than some other things that are told of carbolic acid, we must not assume that it will not work until we have seen it tried. Page 557.

TESTS FOR PREVENTION OF GRANULATION.

I feel quite interested in the Texas experiment of bottling honey at different temperatures. 150 degrees to 180 degrees, in comparison with a bottle neither heated nor sealed. But it will take three years to gather all the fruits. Already some fruit—the unheated granulated in less than three months while none of the other samples did so. The first examination at six months is past, and the two judges report the 150-degree sample much better than the high temperatures, and perceptibly better than those next to it. The 180 degrees was called quite objectionable. I should not have expected so pronounced results. Wonder if "personal equation," as the astronomers say, didn't have something to do with it. I would suggest that next time they capture some assistant judges who shall not be allowed to know "tother from which" as to the samples. Page 564.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Wintering Bees—Moving Bees in Summer.

1. I have 1 colony that I captured while swarming July 10. They are in a 10-frame box-hive, and are working early and late, having 6 frames full of something. What are my first and last duties to have these bees in working order for the next spring? I have the super with starters for the hive, but they are not on the hive.

2. Prof. Cook speaks about not allowing bees to breed after September. How do you prevent this?

3. During the busy season are all the bees supposed to be in the hive at night? If so, why would it not be safe to move a hive?

MISSOURI.

ANSWERS.—1. Perhaps your first duty is to see that there is no lack of stores for winter, for if only six frames have been filled there may be a question as to winter supplies. Your next, and perhaps your last duty, is to study up carefully your bee-book, and then try to put in practice its teachings.

2. The matter is not much under your control, except that you should do nothing to encourage brood-rearing. If any feeding is necessary, let it be done rapidly, for slow daily feeding after the manner of a natural honey-flow has some tendency to start breeding.

3. With rare exceptions, like all virtuous maidens, worker-bees are expected to spend their nights at home. But that has nothing to do with the question of moving, for if you move them a short distance at night all the field-force will return to the old spot the very first time they return from the fields.

Corn-Cobs for Smoker-Fuel.

I often see fuel for smokers mentioned, but never my favorite. Did you ever try it, corn-cobs broken up with a hammer? Try soft, pithy ones first. After a few trials you can select your fuel and break fine or coarse to suit your purpose. PENNSYLVANIA.

ANSWER.—Yes, indeed; among the many things I have tried for smoker-fuel I have used quite a few corn-cobs. The matter of smoker-fuel is largely one of convenience. For some time the most convenient thing for me has been dry chips from the chip-pile, gathered on dry days and kept under shelter. It isn't at all certain, however, that something else may not take their place next year. The chips need no preparation, and make an excellent smoke.

Position of the Winter Stores.

I am a beginner in bee-keeping. This is my first experience and season. I have 3 colonies in 8-frame chaff-hives, with shallow extracting-frames on them. The bees have the supers quite well filled, but very little in the brood-body. Will they carry it down before cold weather, or will they winter in the super where the honey is?

Don't the bees have to have their winter stores in their brood-nest to winter without loss? Is it best for me to get the honey down in the brood-nest? If so, how shall I proceed to do it?

I have looked all over my text-books and bee-papers, but so far I have been unable to find the information I want.

I want to winter the bees out-doors, and as they have little in the brood-nest, and honey above, it worries me as to whether they will winter this way. MICHIGAN.

ANSWER.—The bees must winter where their stores are, and the great probability is that they will have stores all right in the brood-combs. It is quite possible that the bees have more in the brood-combs than you suppose, if you have not looked at them very lately, for when brood-rearing begins to cease all they gather will go into the brood-chamber. If vacant cells are still left below, the bees will carry down honey from the super. It occasionally happens that the colony may settle in the super for their winter quarters, but that is not likely to happen.

The Use of Formaldehyde.

I read the interesting article by R. L. Taylor, on page 502; also another article by G. W. Haines, page 536, in Gleanings in Bee-Culture, on formaldehyde for curing black brood. Now, I would ask:

1. Can full, capped extracting combs be disinfected by the process of closing them up in an air-tight box or cupboard and fumigating them with formaldehyde?

2. Foundation also, when it gives suspicion of being infected, may it be disinfected then?

3. What do the bee-keepers in America think of formaldehyde as a cure for black brood?

4. I think by this time there may have been invented a machine by which formaldehyde is made directly by metilic alcohol (in Italian alcohol metilico.) ITALY.

ANSWERS.—1. I wish I might say to our good friend in Italy that there is do doubt as to the efficacy of formaldehyde. Tests have been made, seeming to show that formaldehyde fumes utterly destroy foul-brood spores in honey fully capped; yet a few have reported adversely. At present we do not really know yet whether to depend upon the drug or not in case of fully sealed combs.

2. There is probably little doubt as to success with foundation.

3. It is probably just as reliable with black brood as with foul brood.

4. That may be in the future. Possibly in Italy you may get ahead of us.

Bees for Non-Swarming.

In your book, "Forty Years Among the Bees," you say that you work toward a non-swarming strain of bees. Why do you say nothing about black bees? The blacks are less inclined to swarm than Italians. SWITZERLAND.

ANSWER.—The above comes from an esteemed German bee-keeper across the water, and it is quite possible that if I lived in Germany or Switzerland, I might pay close attention to black bees. There are good bee-keepers there who say the Italians are not so good as the natives, and I have wondered no little why there should be such a difference of opinion in the two countries. Is it possible that you have a better strain of blacks than we have in this country, or does the climate make the difference? Answering your question directly, I may say that in this country the Italians are so superior to the blacks as honey-gatherers, that even if the Italians should be more inclined to swarming (I wish we had a single word in our language to express that, like the German word *schwarmlustig*), I should still prefer the Italians on account of their superiority in other respects.

Loss of Queens in Introducing.

I have tried to introduce an Italian queen in one of my colonies, which they did not accept. I found the queen a day later in front of the hive dead, so I thought I would try again, and bought two more queens. I tried the second one; I left her in the cage three days, and then took off the pasteboard and let them eat out the candy, which took another 24 hours. I looked in 4 days afterwards, and there I found the dead queen in front of the hive, and also the third one the same way. What is the reason they do not accept the queens, as I had destoyed all the queen-cells? Will it be time enough yet for them to rear a queen if I put in a frame of brood, and they have no drones in the hives? or will they rear their own queen? PENNSYLVANIA.

ANSWER.—It's hard to tell just what the trouble was. In almost any plan of introducing there will sometimes be failures; one case failing where a number succeed, and you can't tell that you've done a thing different in the one case—it just seems like pure contrariness on the part of the bees. Probably the best thing is to unite the bees with other colonies.

Preparing Bees for Winter—Using the Bingham Honey-Knife.

1. I have 54 colonies of bees, and want to prepare them for winter. The hives have plain board covers, and some are old and may leak when the rainy season sets in. Would you advise me to put ducking under the cover to keep out the rain and cold? If so, what weight should I get? and would it be advisable to give it a coat of oil to make it waterproof?

2. Is there anything else I could use that would be better than ducking? You understand, I wish to keep the expense down as low as possible.

3. Would it hurt the bees if they should get wet, on account of the cover leaking?

4. In using the Bingham uncapping-knife, is it proper to use the beveled side or the smooth side of the blade next to the comb? I have seen it used both ways. CALIFORNIA.

ANSWERS.—1. Don't do it; if the rain gets through the cover it will not help to have something inside to hold the moisture.

2. The cover of a hive is a poor place to economize. But the thing to do is not to have something inside, but outside the leaky cover. Perhaps shingles, shooks, or cheap boards.

3. Yes, indeed.

4. I don't know. I wish several would tell us their preference, or whether they use both ways. [Perhaps Mr. Bingham will give the right way to use his knife. We used the bevel edge on the comb.—EDITOR.]

Honey-Plants for Louisiana—Red Clover Queens.

1. What is the best honey-plant that will grow in Louisiana?

2. When planted and how cultivated on high land?

3. Will California sage and catnip grow on Louisiana high lands?

4. By introducing red clover queens now in colonies that will work up to November 15, 1903 (as it never gets cold here before that time of the year), when will the queens begin laying, and when can I expect swarming from the same colonies?

5. Is cotton and Lespedesia (a species of clover) honey-plants of any consequence? There are miles of it around here.

LOUISIANA.

ANSWERS.—1 and 2. I don't know, and hopefully refer the question to some of our Louisiana friends.

3. I must also refer this question, venturing the guess that catnip would succeed, but not the wild sages.

4. If introduced at any time before colonies in general cease brood-rearing, you may expect her to begin laying within a week of introduction; and you may expect swarming next season at the usual time for other colonies to swarm. If it be your object to have the colony swarm as early as possible, you can hasten matters by exchanging combs of brood with other colonies, swapping sealed for unsealed brood.

5. Again I must refer this question. You can decide the question yourself by a little watching when the plants are in bloom.

A Beginner's Questions.

I wish information on some points that I do not find in the books.

1. What stock of bees is the one I enclose you? I have one large colony of these.

2. What is the average life of a colony, or the worker-bee?

3. When the bees are quieted with cold is it all right to lift frames out to examine for the queen?

4. What make of hives is the best for a beginner to have?

5. Is it not best to have the hives set up on legs about 6 inches high, and to keep the legs saturated with kerosene so as to keep away

the moths, mice, ants, etc.? I have had my hive that way ever since the first of July, and cannot find a single pest in the hive.

9. For winter quarters would it be all right to put a dry-goods box over the hive, with a small opening?

The two bees I enclose you were dragged out of the hive and dropped on the ground. MISSOURI.

ANSWERS.—1. It is not easy to identify specimens mashed in the mail, but I think they are what are called hybrid-Italians, a cross between Italians and blacks.

2. I don't know what the average life of a colony is. Badly managed it may not live a year; rightly managed it is a permanent institution. The life of a worker-bee averages something like six weeks in the busy season; during the idle time of the year several months.

3. No, don't disturb a colony if you can help it, unless it is warm enough for bees to fly.

4. The same make that he'll continue to use after he gets over being a beginner. Perhaps there's nothing better than the dovetailed, but tastes and opinions differ.

5. In some places that is worth while on account of ants; it wouldn't be worth while here. Legs don't keep moths out; hardly mice.

6. Yes.

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2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

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☞ If more convenient, Dues may be sent to the Secretary, at the office of the American Bee Journal.

FROM MANY FIELDS

Onion for Bee-Stings.

Mr. Hasty, page 584, "Can't swallow the onion." Perhaps if he would try a few doses he might not be so "hasty" to condemn it. I am confident that a raw onion sliced and rubbed freely on the sting has saved me the discomfort of a badly swollen face. If bee-stings do not swell on you, try it on some one where they do. WM. R. MARTIN.

Washington Co., Pa.

An Aster—Hive Preferences.

I enclose a flower upon which the bees are working with great energy. Will you kindly give its name?

While we have a great abundance of golden-rod bloom I never see the bees or any honey-gathering insects working upon it; neither does heartsease yield honey in this locality.

I have the book "Forty Years Among the Bees," and have enjoyed it very much, and have been very much profited by its contents.

I winter my bees out-of-doors, using the Danzenbaker hives. I think our preferences for hives rests upon the same foundation as a mother's affection for her children—her own babies are always the best. This preference for "our own" seems very deeply embedded in Nature.

W. P. HOGARTY.

Wyandotte Co., Kans., Sept. 28.

[The plant referred to is an aster. The aster season includes September, October, and November, and during this period many varieties of this rather abundant and wide-spread honey-producing plant are in bloom. In many localities the entire winter supply is obtained from the asters and allied plants of the Composite family.—C. L. WALTON.]

Bee-Keeping in Arizona.

So far the honey crop is about the average; I have about 70 pounds per colony, but the bees are still storing from sunflower and alfalfa, and a kind of willow that grows along the river and irrigating ditches.

Sept. 10, we had a pleasant call from Mr. A. I. Root, who was on his way home from the Los Angeles convention, which call was very much appreciated by us bee-keepers; only he did not stay long enough to see all the bee-keepers of the Valley. I was just finishing up the third extracting the day he came, and he seemed surprised because I was extracting so late, but

CONVENTION NOTICES.

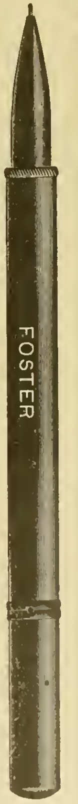
Illinois.—The annual meeting of the Northern Illinois Bee-Keepers' Association will be held in the Court House, in Rockford, Ill., Tuesday and Wednesday, Oct. 20 and 21, 1903. A good program is being prepared, and all interested in bees are invited to attend.

Cherry Valley, Ill. B. KENNEDY, Sec.

Connecticut.—The Connecticut Bee-Keepers' Association will hold their fall meeting in the Capitol at Hartford, on Nov. 4. All bee-keepers are cordially invited to attend. For full information, write the Secretary.

MRS. EDWIN E. SMITH, Sec.

Watertown, Conn.



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This pen consists of a **hard rubber** holder, tapering to a **round point**, and writes as smoothly as a lead-pencil. The **point** and **needle** of the pen are made of **platina**, alloyed with **iridium**—substances of great durability which are not affected by the action of any kind of ink.

They hold sufficient ink to write 10,000 words, and **do not leak or blot.**

As they make a line of **uniform width** at all times they are **unequaled for ruling purposes.**

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Send TWO NEW SUBSCRIBERS to the American Bee Journal for one year, with $2.00; or send $1.90 for the Pen and your own subscription to the American Bee Journal for one year; or, for $1.00 we will mail the pen alone. Address,

(Exact size of the Pen.)

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BOYS WE WANT WORKERS Boys, Girls, old and young alike, make money working for us. We furnish capital to start you in business. Send us 10c stamps or silver for full instructions and a line of samples to work with. DRAPER PUBLISHING CO., Chicago, Ill.

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those same bees are ready to extract again. We have had a fine fall so far, and if it will only stay warm we will get considerable honey yet. We have run about 436 colonies for extracted honey this season, and 183 for comb honey. We have had the comb-honey bees in two apiaries, and the ones for extracted honey in four different yards.

Early in March we moved 180 colonies about 10 miles to a heavy mesquite timber, and they gathered about 700 gallons of nice honey from that source. The mesquite commences to bloom about June 20, and lasts until July 15. Then we moved the bees back to the Valley, and have had two good extractings from them, and will get one more extracting, which, I think, has paid us very well for our work, as that honey comes much earlier than the honey from alfalfa in the Valley. We got our extra extractings out of those we moved, and would have had a great deal more honey if it had not been for paralysis, which affected 81 colonies quite badly, and they did not gather very much honey from the mesquite. I have the bees now in apparently healthy condition, but of course it may return in the spring; if it does not, I will report my treatment.

W. D. JEFFERSON.
Graham Co., Ariz., Sept. 26.

Beedom Boiled Down

Honey for Rheumatism.

It is said that a certain lord found so much benefit from the use of the following mixture for rheumatism that he paid his physician £300 for the privilege of making it generally known, *pro bono publico:*

Recipe:—Sulphur, 1 oz.; cream of tartar, 1 oz.; rhubarb, ½ oz.; gum guiacum, 1 drachm; honey, 16 oz. A tablespoonful night and morning in a tumblerful of white wine and hot water.

This mixture is called "Chelsea Pensioner," and a man of my acquaintance having tried the same has been benefited.—JOHN BROWNING, in British Bee Journal.

Be Careful With Horses Around Bees.

Below is given a graphic account of the trouble one of our Canadian friends had through trying to make a combination of bees and horses. It will serve a good purpose if it warns some one of little experience in that line, so that he may avoid a like disaster. Some of us are looking forward hopefully to the time when we can have "horses" immune to bee-stings—in other words, when automobiles shall become so common and reduced in price that they will be cheaper than horses.

BEES AND HORSES—A BAD COMBINATION AT TOO CLOSE QUARTERS.

A few days ago it became necessary to draw in some grain from alongside of the home apiary of some 160 colonies. The bees were working hard at

Thousands of Hives--Millions of Sections

Ready for Prompt Shipment.

We are not selling goods on NAME ONLY, but on their quality.
In addition to the many car-loads we are shipping to all parts of the United States, we have just made one shipment of five car-loads to England.

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RUBE'S SURPRISE.

Well, I'll Be Bumped!

I don't see what I have been thinking of all summer. Here I could gest as well sent to Griggs Bros. for my Supplies and saved all this freight I've been throwing away and got my goods cheaper, too. Don't see why I didn't send them a trial order sooner and find out what I was doin', long as they sell Root's Goods at their factory prices, gest as they said.

A Word to the Wise is Sufficient.

GRIGGS BROS., - TOLEDO, OHIO.

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to improve the quality, practicability and utility of Page Fence, and we believe we succeed.
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This Emerson stiff-board Binder with cloth back for the American Bee Journal we mail for but 60 cents; or we will send it with the Bee Journal for one year—both for only $1.40. It is a fine thing to preserve the copies of the Journal as fast as they are received. If you have this "Emerson" no further binding is necessary.

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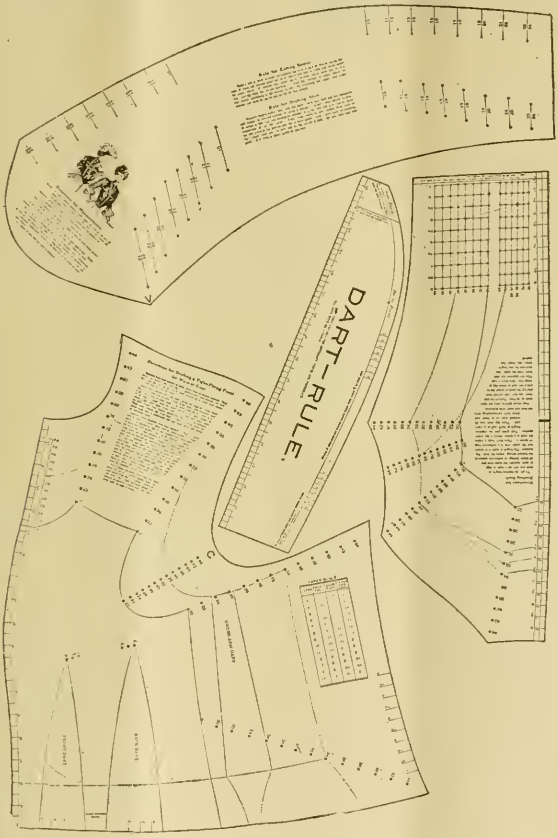
Something FOR OUR Bee-Keeping Sisters in the Winter Time.

We think all ladies will agree with us in saying that every man should at least understand some business, with which, in case of necessity, he could support himself and family. The wealthiest people frequently come to want, and wretched, indeed, is the man who cannot earn a living after his wealth is gone. He sometimes fills the grave of a suicide. And why, in this enlightened age of progression, should not woman, as well as man, be able to depend on her own resources? In case her husband dies in poverty, must she starve or depend on charity? In case her husband fails to provide and grossly mistreats the woman he has sworn to cherish, must she humbly submit? **A THOUSAND TIMES, NO!** Let every woman, before she marries, have some knowledge that can be used to make her a living. Every mother, rich or poor, should make her daughters, in a certain degree, independent, by giving them some kind of a trade, and teaching them to be self-reliant. Mothers should have their daughters learn to sew, and not neglect this important part of their domestic education. The daughter so taught will not only make a better wife and mother, but will also be more likely to secure a better husband, and will always command his respect. He will not look upon her as a helpless "know-nothing," but will know that if he fails in his duties, she can live without him, and this can only strengthen the bond between them. A thorough knowledge of dress-making can always be turned into gold, and become the means of support for the mother and her little ones. She may never have to use this knowledge in this way, but she has a trade and can use it if necessary.



The outline cut shown herewith is a condensed copy of **THE NEW LONDON LADIES' TAILOR SYSTEM** for drafting and cutting ladies' and children's garments. For simplicity and accuracy it has no superior among the more expensive systems. Thousands of girls have learned more about drafting and cutting with this system than they knew about it after serving their apprenticeship in some of the dressmaking shops of the United States and Canada. Thousands of the best garment cutters have laid their complicated and expensive system aside, and are now using **THE NEW LONDON TAILOR SYSTEM.** Thousands have been sold at $5.00 each, but we mail it **Free** to a paid-in-advance subscriber to the American Bee Journal for sending us **two new** subscribers at $1.00 each; or we will send it to any one with a year's subscription to the American Bee Journal, both for $1.75; or, we will mail the Tailor System alone for $1.00. Address all orders to

GEORGE W. YORK & CO.,
144 & 146 East Erie Street, CHICAGO, ILL.

the time on buckwheat just west of the yard. Through over confidence, the men in charge of the horses (a spirited team) were told to drive right up against the apiary where the bees were flying by the thousands against a strong wind. A few bees at once attacked the horses which could not be induced to move, one throwing itself in the harness. The bees then literally poured out on the horses by the thousands, and the men, after vainly trying to get the horses to go, and after receiving a lot of stings, concluded that "'twas better to fight and run away, and live to fight another day," so accordingly took "leg bail" on double-quick time.

Being only a short distance away at the time, and hearing the noise, the writer arrived on the scene of action bare-headed and in his shirt-sleeves. Needless to say he met with a very warm reception. After with great difficulty unhitching the horses by the assistance of a brother, who had now arrived, and by the free use of the whip induced them to leave the place slowly, covered with swarms of angry bees.

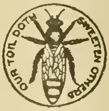
The poor brutes were literally stung over every inch of their bodies, and it was thought that they would certainly die. Salt was given to them as soon as possible, but owing to the way they kicked and plunged after being put in the stable, hardly anything could be done by the way of removing the stings. However, they have pulled through, and to-day (a week after the stinging) they appear to be improving nicely, although their bodies are covered with lumps full of pus which are now discharging. While the writer received hundreds of stings on the head, face and neck, aside from a severe pain

HONEY-JARS.

I can sell you a White Glass Honey-Jar, holding 15 ounces of honey, at $4 00 per gross. Also the standard square one-pound Jar at $4.50 per gross. Sample of either Jar by mail on receipt of 10 cents for postage.

J. H. M. COOK, Bee-Keepers' Supplies
62 Cortlandt St., NEW YORK CITY.
41Atf Please mention the Bee Journal.

A Celluloid Queen-Button is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-lapel. It often serves to introduce the subject of honey, and frequently leads to a sale.


OUR TOIL DOTH SWEETEN OTHERS

The picture shown herewith is a reproduction of a motto queen-button that we are furnishing to bee-keepers. It has a pin on the underside to fasten it. Price, by mail, 6 cents; two for 10c; or 6 for 25 cents. Send all orders to the office of the American Bee Journal.

Sections, Shipping-Cases, Honey-Cans,

And everything necessary for the bee-keeper
Prompt shipping. FINE ITALIAN QUEENS
Catalog free.

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DAIRYMEN ARE DELIGHTED to meet those who work for us. Cow keepers always have money. We start you in business. You make large profits. Easy work. We furnish capital. Send 10 cents for full line of samples and particulars.
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Knowing just when to sell or when to buy means dollars to the farmer. It is a lever that can be made to count in profit in many ways and the telephone is the greatest means to this end. With a

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you are in a position to *know* the market prices from day to day, hour to hour. They're not a luxury—cost is trifling—they're a necessity to successful farming. Send five 2c stamps for 128-page telephone book. Our book F- 4, "Telephone Facts for Farmers," is free.

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Langstroth on... The Honey-Bee

Revised by Dadant—1900 Edition.

This is one of the standard books on bee-culture, and ought to be in the library of every bee-keeper. It is bound substantially in cloth, and contains over 500 pages, being revised by those large, practical bee-keepers, so well-known to all the readers of the American Bee Journal—Chas. Dadant & Son. Each subject is clearly and thoroly explained, so that by following the instructions of this book one cannot fail to be wonderfully helped on the way to success with bees.

The book we mail for $1.20, or club it with the American Bee Journal for one year—both for $2.00; or, we will mail it as a premium for sending us **THREE NEW** subscribers to the Bee Journal for one year, with $3.00.

This is a splendid chance to get a grand bee-book for a very little money or work.

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SEND YOUR NAME
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DANDY GREEN BONE CUTTER
The fastest and easiest running machine made. It will double your egg yield. Price $5 up.
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in the head for about an hour, no serious effects were felt. To be sure, there was a little puffering about the face, but not nearly as much as I have often seen from the effects of a single sting.

I merely relate this as a warning to others to use judgment when it is necessary to bring horses near a large apiary, as no one who has never witnessed the blind, impotent fury of bees when angered in this way, can form any idea of their vindictiveness in such cases.—YORK COUNTY BEE-KEEPER, in Canadian Bee Journal.

Formaldehyde.

The most suitable time for fumigating combs with formaldehyde is when foul brood is in growth, *i. e.*, in the spore stage. My practice is to fume all combs removed from colonies before returning.

In using formaldehyde for fuming care should be taken to have no brood in the combs, as it kills the brood, even when capped; and this brood has to be removed by the bees, which wastes a lot of time. I first remove all cappings, and if the comb contains two or three pounds of honey, I extract this. It is quite evident that I read Mr. Saunders' first letter (5212, page 336) on the same wrongly, owing to his not mentioning that he aired the combs, consequently I thought he had not done so. In reply to his letter (5225, page 354), if he will mix a little formaldehyde with twice its volume of water, and evaporate in a test tube—smelling the gas as it is evolved—it will be found that when heating the tube after the liquid has evaporated a

Order Your Bee-Supplies Now While we can serve you prompt, and get them at bottom prices.

42A11t **R. H. SCHMIDT CO., Sheboygan, Wis.**

WANTED! Fancy Comb Honey

In No-drip shipping-cases. Also extracted, in barrels or cans. Mail samples and quote your best price delivered Cincinnati.

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Forty Years Among the Bees, by Dr. C. C. Miller.—This book contains 328 pages, is pound in handsome cloth, with gold letters and design; it is printed on best book-paper, and illustrated with 112 beautiful original half-tone pictures, taken by Dr. Miller himself. It is unique in this regard. The first few pages are devoted to an interesting biographical sketch of Dr. Miller, telling how he happened to get into bee-keeping. Seventeen years ago he wrote a small book, called "A Year Among the Bees," but that little work has been out of print for a number of years. While some of the matter used in the former book is found in the new one, it all reads like a good new story of successful bee-keeping by one of the masters, and shows in minutest detail just how Dr. Miller does things with bees. Price, $1.00.

Bee-Keeper's Guide, or Manual of the Apiary, by Prof. A. J. Cook, of Pomona College, California. This book is not only instructive and helpful as a guide in bee-keeping, but is interesting and thoroughly practical and scientific. It contains a full delineation of the anatomy and physiology of bees. 544 pages. 295 illustrations. Bound in cloth. 19th thousand. Price, $1.20.

Langstroth on the Honey-Bee, revised by Dadant.—This classic in bee-culture has been entirely re-written, and is fully illustrated. It treats of everything relating to bees and bee-keeping. No apiarian library is complete without this standard work by Rev. L. L. Langstroth—the Father of American Bee-Culture. It has 520 pages, bound in cloth. Price, $1.20.

A B C of Bee-Culture, by A. I. & E. R. Root.—A cyclopedia of over 500 pages, describing everything pertaining to the care of the honey-bees. Contains about 400 engravings. It was written especially for beginners. Bound in cloth. Price, $1.20

Scientific Queen-Rearing, as Practically Applied, by G. M. Doolittle.—A method by which the very best of queen-bees are reared in perfect accord with Nature's way. Bound in cloth and illustrated. Price, $1.00; in leatherette binding, 60 cents.

Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—It is nicely illustrated, contains 160 pages. Price, in cloth, 75 cents; in paper, 50 cents.

Advanced Bee-Culture, Its Methods and Management, by W. Z. Hutchinson.—The author of this work is a practical and entertaining writer. You should read his book; 90 pages; bound in paper, and illustrated. Price, 50 cents.

Bienen-Kultur, by Thomas G. Newman. —This is a German translation of the principal portion of the book called "Bees and Honey." 100-page pamphlet. Price, 25 cents.

Apiary Register, by Thomas G. Newman.—Devotes two pages to a colony. Leather binding. Price, for 50 colonies, $1.00.

Dr. Howard's Book on Foul Brood. —Gives the McEvoy Treatment and reviews the experiments of others. Price, 25 cents.

Winter Problem in Bee-Keeping, by G. R. Pierce.—Result of 25 years' experience. Price, 30 cents.

Foul Brood Treatment, by Prof. F. R. Cheshire.—Its Cause and Prevention. 10 cts.

Foul Brood, by A. R. Kohnke.—Origin, Development and Cure. Price, 10 cents.

very powerful gas is still evolved. There is also a sediment which nearly all evaporates on further heating. The same thing takes place with formaldehyde without water, only the residuum left is black. I am quite aware that formaldehyde attacks iron and steel, but only to a limited extent, and when a layer of oxide is formed on the surface of the metal it ceases to attack the metal, owing to the oxide protecting the metal. With regard to the addition of water causing the gas to polymerise, that will not injure its properties as a disinfectant, even if it did so. Acetic acid and lactic acid are polymers, and water is added to these, but does not alter their uses, and so with formaldehyde. Mr. Saunders asks, "Have I fumed combs with diseased brood, pollen, and heavy stores, and given them back to the bees without a return of the disease?" Yes, I have done so. That is, I have so fumed combs, and have not so far seen any return of disease.

I have only been experimenting with formaldehyde last year and this, consequently I am not in a position to give any definite information as to results this autumn, but hope to do so some time next year.—BLACKWOOD, in British Bee Journal.

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The Gold Winner Seed Crop of 1903. $10.00 per 1,000. Just the thing for bee-keepers. The most profitable plant known to man. All stock guaranteed to be true American. Address,
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THE WOOD-BRUSH BEE-HIVE AND BOX CO.,
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Full Line. Best Stock. Low Prices.
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$300,060,000.00 A YEAR
and you may have part of it if you work for us. Uncle Sam's poultry product pays that sum. Send 10c for samples and particulars. We furnish capital to start you in business. Draper Publishing Co., Chicago, Ill.

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Dr. Miller's New Book
Free as a Premium for Sending Two New Subscribers.
The book contains 328 pages, is bound in handsome cloth, with gold letters and design; it is printed on best book-paper, and illustrated with over 100 beautiful original half-tone pictures, taken by Dr. Miller himself. It is unique in this regard.
The first few pages of the new book are devoted to an interesting biographical sketch of Dr. Miller, telling how he happened to get into bee-keeping. Seventeen years ago he wrote a small book, called "A Year Among the Bees," but that little work has been out of print for a number of years. While some of the matter used in the former book is found in the new one, it all reads like a good new story of successful bee-keeping by one of the masters, and shows in minutest detail just how Dr. Miller does things with bees.
HOW TO GET A COPY OF DR. MILLER'S "FORTY YEARS AMONG THE BEES."
The price of this new book is $1.00, post-paid; or, if taken with the WEEKLY American Bee Journal for one year, BOTH will be sent for $1.75.
Or, any present regular subscriber to the American Bee Journal whose subscription is paid in advance, can have a copy of Dr. Miller's new book *free as a premium* for sending us Two New Subscribers to the Bee Journal for one year with $2.00. This is a magnificent offer, and should be taken advantage of at once. For many of our readers it is not only an easy way to earn a copy of the book, but at the same time they will be helping to extend the subscription list of the old American Bee Journal, and thus aiding also in spreading the best kind of apicultural information among those who would be successful bee-keepers.
Address all orders to
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HONEY AND BEESWAX

MARKET QUOTATIONS

CHICAGO, Oct. 7.—The volume of sales are larger than at this time last year, and the supply more than corresponds with sales; but the prices and good quality of honey are expected to make a larger demand than we have had for several years. No. 1 to fancy sells at 13@14c, with practically no sale for off grades, which are quoted at 10@12c. Extracted, white, 6@7c; amber, 5@6c, according to quality and kind of package. Beeswax, 28@30c.
R. A. BURNETT & CO.

BOSTON, Oct. 8.—Comb honey continues to be in good demand. Fancy white honey in cartons we quote at 18c; No. 1, at 16c; glass-front cases fancy white. at 16c; No. 2, at 14c. Extracted honey, Florida. 6½@7½c, according to quality.
BLAKE, SCOTT & LEE.

CINCINNATI, Oct 7.—The demand for honey is a little better. The prices rule about the same. Extracted is sold as follows: Amber, in barrels, from 5@5½c; in cans it brings about half cent more; water-white alfalfa sells from 6@6½c; white clover, from 6¾@7½c. The comb honey market is quite lively and same is sold: Fancy water-white from 14½@15½c. Beeswax, good demand at 30c. C. H. W. WEBER.

ALBANY, N.Y., Oct. 8—Honey market firm for comb at good prices. We quote: Fancy white, 16c; A No. 1, 15c; No. 1, 14½@15c; dark or buckwheat, 13½@14c. Extracted seems to be more plenty throughout our correspondence than comb. We quote: White, 7@7½c; mixed, 7½@7c; dark, 6@6½c. Beeswax, 28@30c.
H. R. WRIGHT.

KANSAS CITY, Oct. 6.—The demand for comb and extracted honey is good. We quote: Fancy white comb, 24 sections, per case. $3.00; No. 1, $2.90; No. 2, and amber, $2.75. Extracted, white, per pound, 7c; amber, 5½@6c. Beeswax, 25@30c.
C. C. CLEMONS & CO.

CINCINNATI, Oct. 1.—Comb and extracted honey are coming in freely, and the demand is good with steady prices. We are making sales at the following prices: Amber extracted at 5¾@6½c: white clover. 6½@7½c. Fancy comb honey, 15c. Beeswax, 30c.
THE FRED W. MUTH CO.

NEW YORK, Sept. 28.—Comb honey is arriving quite freely now, and is finding ready sale at 15 cents per pound for fancy white, 13@14c for No. 1 white, and 12c for No. 2 white and amber. Very little buckwheat on the market as yet, and prices are hardly established.

Extracted honey is ruling about the same as last with plenty of offerings of all grades.

Beeswax is somewhat declining and selling at present at from 28@29c per pound.
HILDRETH & SEGELKEN.

SAN FRANCISCO, Sept. 30.—While comb, 1-lb. frames, 13@14 cents; amber, 9@11c. Extracted, white, 6½@—; light amber, 5½@6c; amber, 5@5½c; dark amber, 4¼@4½c. Beeswax, good to choice, light, 27½@29c; dark, 25@26c.

There have been moderate receipts, mostly representing prior arrival purchases. The market continues to present a firm tone, but is not particularly active, buyers not caring to stock up very heavily at extreme current rates, and finding it exceedingly difficult to obtain noteworthy concessions in their favor.

WANTED! FANCY COMB HONEY
In no-drip shipping-cases. Also Amber Extracted in barrels or cans. Quote your best price delivered Cincinnati. The Fred W. Muth Co.
32Atf Front and Walnut, CINCINNATI, OHIO.
Please mention Bee Journal when writing.

WANTED—Comb Honey in quantity lots. We are perhaps the only dealers in this article owning as much as 150,000 pounds at one time. Please state quantity, quality and price asked for your offerings. Thos. C. Stanley & Son,
24Atf MANZANOLA, COLO., or FAIRFIELD, ILL.

WANTED—Extracted Honey.
Mail sample and state lowest price delivered Cincinnati. Will buy FANCY WHITE COMB HONEY, any quantity, but must be put up in no-drip shipping-cases.
C. H. W. WEBER.
2146-48 Central Ave., CINCINNATI, OHIO.
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The Best Bee-Goods in the World....

are no better than those we make, and the chances are that they are not so good. If you buy of us **you will not be disappointed. We are undersold by no one.** Send for new catalog and price-list and free copy of THE AMERICAN BEE-KEEPER; in its thirteenth year; 50 cents a year; especially for beginners.

—THE—

W. T. Falconer Mfg. Co.,
JAMESTOWN, N. Y.

W. M. GERRISH, Epping, N.H., carries a full line of our goods at catalog prices. Order of him and save the freight.

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If you want the Bee-Book
That covers the whole Apicultural Field more completely than any other published,
send $1.20 to

Prof. A. J. Cook, Claremont, Cal.,
—FOR HIS—
"Bee-Keeper's Guide."
Liberal Discounts to the Trade.

Hives, Sections, Foundation,
etc. We can save you money. Send list of goods wanted and let us quote you prices. ROOT'S GOODS ONLY. Send for Catalog.
M. H. HUNT & SON, Bell Branch, Mich.

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25 years the best. Send for Circular.
25Atf T. F. BINGHAM, Farwell, Mich.

Please mention Bee Journal when writing.

SHEEP MONEY IS GOOD MONEY and easy to make if you work for us. We will start you in business and furnish the capital. Work light and easy. Send 10 cents for full line of samples and particulars.
DRAPER PUBLISHING CO., Chicago, Ills.

Long Tongues Valuable

South as well as North.

How Moore's strain of Italians roll in the honey down in Texas.

HUTTO, TEX., Nov. 19, 1902.

J. P. MOORE.—Dear Sir:—I wish to write you in regard to queens purchased of you. I could have written sooner, but I wanted to test them thoroughly and see if they had those remarkable qualities of a three-banded Italian bee. I must confess to you I am more surprised every day as I watch them. They simply "roll the honey in." It seems that they get honey where others are idle or trying to rob; and for gentleness of handling, I have never seen the like. Friend E. R. Root was right when he said your bees have the longest tongues; for they get honey where others fail. I will express my thanks for such queens. I am more than pleased. I will stock my out-apiaries next spring with your queens.

Yours truly, HENRY SCHMIDT.

The above is pretty strong evidence that red clover is not the only plant which requires long-tongue bees to secure the greatest quantity of nectar.

Daughters of my 23-100 breeder, the prize-winner, and other choice breeders: Untested, 75 cents each; six, $4.00; dozen, $7.50. Select untested, $1.00 each; six, $5.00; dozen, $9.00. Safe arrival and satisfaction guaranteed. Circular free. I am filling all orders by return mail, and shall probably be able to do so till the close of the season.

J. P. Moore, L. Box 1, Morgan, Ky.
31Atf Pendleton Co.

Please mention Bee Journal when writing Advertisers.

26th Year **Dadant's Foundation** 26th Year

We guarantee Satisfaction. What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS. PATENT WEED-PROCESS SHEETING.

Why does it sell so well? Because it has always given better satisfaction than any other. Because in 25 years there have not been any complaints, but thousands of compliments.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

Bee-Keepers' Supplies OF ALL KINDS *****

Very fine pure-bred **BARRED PLYMOUTH ROCK** Chickens and Eggs for sale **at very low prices.**

Langstroth on the Honey-Bee—Revised,
The classic in Bee-Culture—Price, $1.20, by mail.

BEESWAX WANTED at all times.

DADANT & SON,
Hamilton, Hancock Co., Ill

Please mention Bee Journal when writing.

Root's Goods in Chicago.

The business for many years conducted by George W. York & Co., at 144 E. Erie St., as agent for The A. I. Root Company's Supplies, is this day transferred to The A. I. Root Company, to be conducted as a Branch Office. All outstanding accounts will be paid George W. York & Co.

The policy of Branch House will not be changed. We shall continue to serve the interests of bee-keepers to the best of our ability, and to increase our facilities whenever possible for such service. Mr. York will still be in the same office with us, and the benefit of his years of experience with this trade will thus be available.

Please note change of name to avoid confusion in our work.

Oct. 1, 1903. **THE A. I. ROOT COMPANY.**

All orders, remittances, inquiries, etc., should be addressed to The A. I. Root Company, 144 E. Erie St., instead of George W. York & Co.

◆

STATEMENT BY GEORGE W. YORK & CO.

TO OUR CUSTOMERS AND FRIENDS:

In transferring back to The A. I. Root Company the bee-supply business which we took over from them some years ago, we do so with regret, as we have labored to build up a large and honorable trade in bee-appliances, and value beyond expression the generous patronage accorded us during the years. We trust the same will be continued to our successors in the business.

Please note that this transfer does not in any wise affect our publishing the American Bee Journal, or handling bee-books and queens. But we expect from now on to be able to devote more time to the Bee Journal, as for years we have had "too many irons in the fire" to give it the attention it requires.

GEORGE W. YORK & CO.

Chicago, Ill., Oct. 1, 1903.

The Chicago-Northwestern Convention—Dec. 2 and 3, 1903

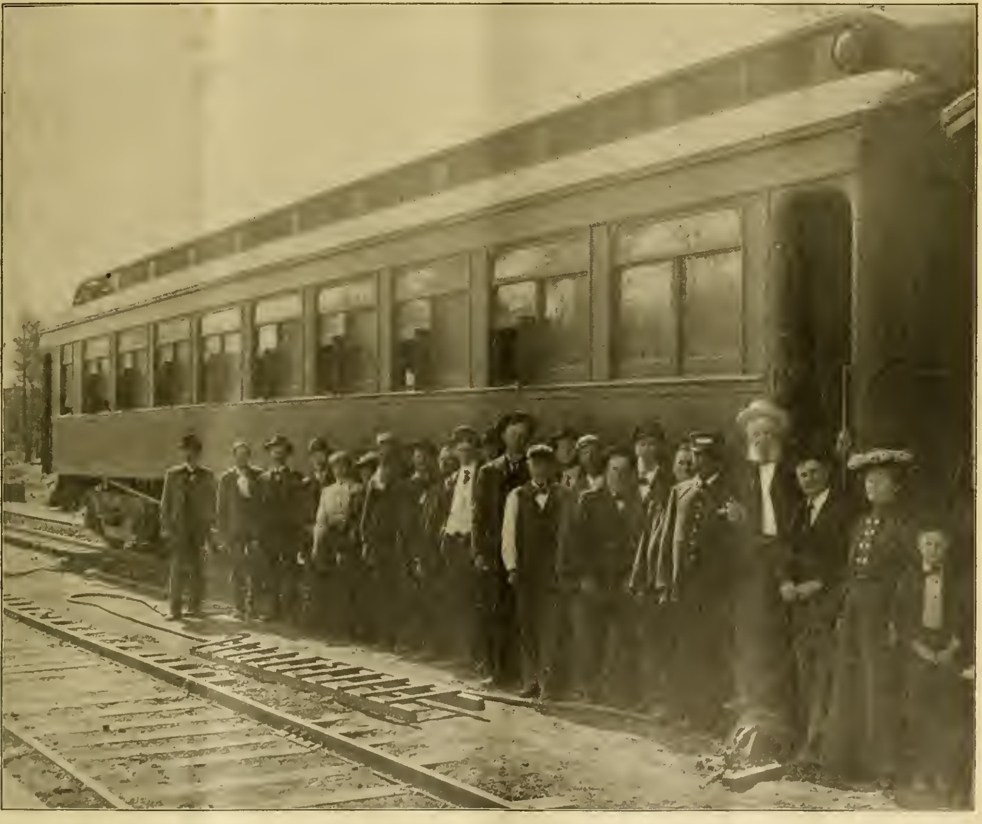
AMERICAN BEE JOURNAL

Published Weekly by GEORGE W. YORK & CO., 144 & 146 E. Erie Street.

43d Year. CHICAGO, ILL., OCT. 22, 1903. No. 43.

The Bee-Keepers' Car from Chicago to Los Angeles.

(LEFT AUG. 12, 1903—ARRIVED AUG. 18, 1903). *Photo by W. Z. Hutchinson.*



(Counting from left to right, they are as follows:)

1. D. J. Price
2. A. F. Morley
3. G. H. Van Slyke
4. George W. York
5. Mrs. York
6. Mrs. Kluck
7. N. A. Kluck
8. W. M. Pierson
9. N. E. France
10. Chas. Schneider
11. N. Brooks
12. H. H Moe
13. A. I. Root
14. H. H. Hyde
15. E. D. Woods
16. Dr. C. C. Miller
17. M. Best
18. E. C. Wheeler
19. "Our Porter"
20. J. J. Shearer
21. H. D. Tallady
22. Mrs. Tallady
23. (Not Our Boy).

☞ LOOK AT YOUR WRAPPER-LABEL !

Personal to Our Subscribers!

CHICAGO, ILL., Oct. 6, 1903.

We have just been informed by the Post-Office Department that **expired subscriptions** to a newspaper or magazine do not constitute legitimate subscriptions so as to maintain the second-class rate of postage, but if such **are** mailed with paid-in-advance subscriptions it places the whole edition under the third-class rate, which, in the case of the American Bee Journal, is about 14 times higher than the second-class rate. In other words, if the third-class rate of postage were enforced on the Bee Journal, we would have to raise the subscription price to $1.50 a year at once. This we do not want to do. But we are compelled to show that every subscriber who gets the American Bee Journal is a **paid-in-advance subscriber,** in order that all may be mailed under the second-class rate. And the only way we can do that is for each one now in arrears to pay his or her subscription, not only what is past due, but also an advance subscription.

In order that **ALL** who are in arrears may put their subscription credit in advance **right away,** we wish to make the following offers:

We will credit any subscription sent us—1 year for $1.00;

2 Years for $1.80; 3 Years for $2.50; or 5 Years for $4.00.

Of course, these prices are not limited to those who are in arrears, but if any others wish to take advantage of them they may do so.

Very Special Notice to those in Arrears.

In order to comply with the requirements of the Post-Office Department, we will be obliged to discontinue sending the Bee Journal to all who are now in arrears on their subscription. We know this is a very sudden notice, but it is not our fault, as this is the first chance we have had to say anything about it since **we** learned of it from the Post-Office Department.

But all who are in arrears can easily start a remittance to us in time so that it shall arrive at our office before the end of this month, and thus it will not be necessary to miss a single copy of the old American Bee Journal.

We are planning some great things for our readers for 1904, any one of which will well be worth the yearly subscription price of the Bee Journal. But by paying for 5 years at one time, it will cost you only 80 cents a year. That is only a trifle over 1½ cents per copy!

Let us have a prompt response from all who are in arrears, and also from those who will soon be in arrears, so that all our readers may continue right along without a single break.

It may be that some can also send along the names of one or more new subscribers with their own renewals, and thus help increase our list of readers. We are offering some handsome premiums for such work.

Trusting that all our readers had a good year with the bees, and hoping that we shall be favored with a general response by way of paid-in-advance subscriptions, we remain,

Yours for the best bee-literature,

GEORGE W. YORK & CO.,
144 & 146 E. Erie Street, CHICAGO, ILL.

☞ P. S.—If your wrapper-label reads "dec02" it means that your subscription expired with December, 1902; if it reads "jun02," it expired with the end of June, 1902. And so with any other month and year that may be shown on your wrapper-label.

ESTABLISHT IN 1861
AMERICAN BEE JOURNAL
THE OLDEST BEE-PAPER IN AMERICA

43d YEAR. CHICAGO, ILL., OCT. 22, 1903. No. 43.

Editorial Comments

What Have You Learned during the past season's experience? Suppose you write out some of the things that have either puzzled you, or that you have solved, and send it in for publication. You have been helped by what others have written, why not help them by contributing from your experience during the past season, or previous thereto?

We will be glad to publish whatever we think will be interesting or helpful. Who knows but you may be practicing many "short cuts" in the apiary that would be new to other bee-keepers. Tell us about them, please.

Photographs for Engravings.—We are constantly wanting pictures of apiaries and other things of interest to bee-keepers in general, for use in the American Bee Journal. You, perhaps, have been interested in looking at the picture of some other bee-keeper's apiary, and doubtless others would be pleased to see yours. That is, if it is a nice, up-to-date one.

We can not, of course, promise to use all the pictures that may be sent to us, but we usually find a place for nearly all of them in time. Whatever pictures are sent in should be clear and bright, in order to make good engravings. A good way to do is to send us the photograph and let us report on it as to whether or not we can use it. If a favorable report is received, then you can send on a write-up to go with the picture in the American Bee Journal.

The Hay and the Honey Crop.—A subscriber sends the following clipped from the Lovelocks, Nev., Tribune:

> "The cattlemen claim the bees are taking the nutriment out of the hay. They say that a ton of honey probably represents the essence from 200 tons of alfalfa, and that the hay is just that much poorer in saccharine matter. They say that it stands to reason that you can't take all this honey out of the hay and still have it as rich in saccharine matter. This belief goes far to portend action at the next legislature regulating bee-pasturage."

That probably gives the views of a good many of the cattlemen who are entirely honest in their opinions, but who are not well informed. The better informed can hardly hold such views. The paper from which the extract is made is to be commended for its fairness in giving both sides—a thing that can not always be credited to the weekly press. The clipping goes on:

> "The apiarists ridicule these claims of the stockmen. They say the bees are a benefit to the alfalfa. They say that all this nectar that is made into honey would evaporate anyway and not be saved in the hay. They cite the old belief that the bees injured the orchards. Now, the orchardists of California give the free pasturage to the bee-men. The bees fertilize the bloom and make more fruit. They say that there is no complaint in California that the bees sterilize the alfalfa bloom. They say that all one has to do is to read up on scientific work, and see that bees are a benefit feeding on alfalfa bloom, and improves the hay."

Going back to the views of the cattlemen, if "it stands to reason that you can't take all this honey out of the hay and still have it as rich in saccharine matter," it ought not to be a difficult thing to show this very clearly and positively by actual experiment. Have any of the experiment stations done this? Indeed, it is not necessary to refer the matter to the experiment stations. Any cattleman who thinks the hay is the poorer for the bees can try the experiment for himself. Let him cover a plot of alfalfa with mosquito-netting so the bees can not get at it. He ought to find the ripened flowers sticky with honey. But if, on the contrary, he finds that the nectar has all evaporated into thin air, he may change his mind as to the mischief done by the bees.

The experiment might also show him that instead of being a damage the bees are a benefit; for in the covered plot, where the bees have no chance to fertilize the blossoms, he would find a failure in the seed crop. The case of red clover is in point. Every farmer knows that seed can be obtained from the second crop of red clover, but not from the first, but not every farmer has inquired why. The tubes of the red clover blossoms are too deep for the hive-bee to reach the nectar, and the bumble-bee does the fertilizing. But the bumble-bee does not start in the early summer with a full colony like the hive-bee; for some time there is only a single bee, and only when the second crop of red clover comes are bumble-bees in sufficient numbers to fertilize the blossoms.

The probability is that the counsels of the more intelligent cattlemen will prevail, and that no effort will be made to hinder the busy bee in its beneficent work.

Phacelia continues to be vaunted as a forage-plant in European journals, and there is no question as to its being a good honey-plant; but if any one has found it to be valuable as a forage-plant in this country he is keeping very mum about it.

The Pronunciation of Propolis is given in the British Bee Journal with all the vowels short, and to speak it otherwise is pronounced "a grievous classical blunder." That may be all right "in that locality," but the Standard dictionary gives the preference to long o in the first syllable. Still, if *we* were making a dictionary we would say prop-o-lis, accenting the first syllable, with o short sound.

Danger from Stray Swarms.—In some regions the past year has been an unusual one for swarming, and some bee-keepers have rejoiced at the sudden increase of colonies by means of stray swarms coming to them. But such swarms sometimes bring bane instead of blessing. A case is reported in the British Bee Journal in which a stray swarm carried foul brood with it. It is well to give extra scrutiny to stray swarms—indeed, to a fresh accession of bees from any source.

A Larger Opening for Honey-Cans.—One of the most extensive users of extracted honey wrote us as follows, some time ago:

> EDITOR AMERICAN BEE JOURNAL:— We take the liberty of recommending to the bee-keepers, who put up honey in 5-gallon cans, to endeavor to secure cans provided with a 2½ inch screw-top opening instead of the 1½-inch which is now in use. The large opening has many advantages over the smaller one. The principal ones are that it is easier to remove the honey, and the empty can is more salable to dealers who use the second-hand cans for other purposes. We understand that a certain company that makes a large number of these honey-cans, would be perfectly willing to furnish cans with the larger opening, if so required by its customers. This change can be made without detriment to the cans now in existence with the smaller opening.
>
> ——— ——— ———.

We have often thought that the screw-top opening on the majority of the 5-gallon cans used is entirely too small. The 4-inch screw-cap is much better, we think.

Of course, where a honey-gate is used, we suppose the smaller opening is better, and yet we do not see why a honey-gate suitable for the 4-inch opening could not be made for about the same price as the smaller one.

The larger, or 4-inch, opening is much better for cleaning and drying the can after emptying its contents.

We should like to hear from extensive bee-keepers who put up their honey for market in the 5-gallon cans, as to their opinion of a larger opening than is now generally used.

Formalin of Variable Strength.—Prof. F. C. Harrison says in the Canadian Bee Journal:

> Formalin is not explosive, but I would caution you to be extremely careful to find out whether the formalin you supplied is of the correct strength, as it is a very adulterated article. For disinfecting bee-combs I advise the use of one-half more than is necessary in order to safeguard any weakness of the drug.

If this be true, the one great claim for formalin in preference to any other preparation of formaldehyde seems to be not well founded. It was claimed for formalin that it is guaranteed to be uniform in strength. It begins to look as if one pays an extra price merely for the name "formalin."

Miscellaneous Items

Pasadena and Homeward Bound.—The last day of our stay in California had come. The forenoon of Monday, Aug. 24, was spent in going from Pasadena to Los Angeles to get our tickets signed by the proper agent, so that we could start on our homeward trip in the evening. While in Los Angeles we called at the office of the California National Honey-Producers' Association, which is located in one of the finest buildings in the city. Pres. Geo. W. Brodbeck escorted us up to their office, and shortly thereafter we started back to Pasadena.

In the afternoon, our cousin, Mrs. Freeman, gave us (Mrs. York and the writer) a long carriage-ride over the beautiful city of Pasadena. While August is about the worst month in all the year to see the beauties of both man's work and that of Nature also, we saw enough to convince us that in March or April the sights in and about Pasadena must be simply entrancing. We certainly never saw so many palatial residences and surrounded with their immense grounds or lawns. We believe that some 40 millionaires live on one of the finest avenues. The driver seemed to know just who lived in each mansion during the winter, and where during the summer. Of course, it is well known that the majority of the wealthy owners spend the winters there, and during the rest of the year are in their regular places of business in Chicago, New York, or some other large city, making enough money to keep up their grand home in Sunset Land.

We must have ridden 15 or 20 miles around Pasadena, and saw the best parts of that American Paradise. We think we could endure living there permanently if we had enough of the where-withal to pay expenses. But we had to think of getting ready to start back for the smoky city of Chicago, and at about 8 p.m. we were at the station in Pasadena, waiting for the train to take us home.

ONE OF THE LOVELY CALIFORNIA HOMES.

We were only three of our former car-load of bee-keepers—Dr. Miller, Mrs. York, and her smaller half. But it was an enjoyable return trip. We could see much that we had missed when going. Of course, there were none that we knew on the train except those mentioned, so it was a very quiet homeward journey. We visited with Dr. Miller until we both would get tired and sleepy in broad daylight. It was such a long ride—from Monday evening to Friday morning! Go to sleep at night with the train rushing on, and get up in the morning with the train still rushing on. Keeping that up for four nights and three days, and we had come from Los Angeles to Chicago.

It was a trip long to be remembered. Perhaps few of the number who went in that car-load of bee-keepers, over two-thirds of the way across the continent, will ever take so long a ride again. As we began this series of convention notes with an account of the car-load of bee-keepers, we close with giving a picture of the car and its "contents" as all appeared on Monday morning, Aug. 17, a few minutes before leaving Grand Canyon for Williams, on the main line of the Santa Fe railroad. Mr. and Mrs. Hanegan, with "Baby Joy," did not take the side-trip to Grand Canyon, so they do not appear in the picture; Mrs. E. C. Wheeler must have been inside the car; and as Mr. Hutchinson was managing the camera so the rest of us might be shown, he is absent from the picture.

So, with this explanation, we invite our readers to take another look at the front-page picture, and see if you don't all wish you could have been in that happy company—the first car-load of the kind ever known to go so far to attend a bee-keepers' convention where so many extensive bee-keepers were assembled, and who represented so many colonies of bees and so many pounds of honey—

No. of Colonies.	No. lbs. Comb Honey.	No. lbs. Ext'd Honey.
Over 45,000.	Over 300,000.	Over 2,000,000.

The Chicago-Northwestern Convention will be held Wednesday and Thursday, Dec. 2 and 3. The executive committee held a meeting Oct. 15, and will soon be able to announce the exact place of meeting in Chicago, and also give some particulars as to program. Look out for a great meeting. Plan to be present. It stands next to the National convention. Some have told us they thought it better than the National.

Three Fine Photographs were taken by W. Z. Hutchinson, when on the Los Angeles trip in August, for copies of which we are indebted to him. The first is of the Grand Canyon (and it is a grand picture); the second shows the bee-keepers' car, a reproduction appearing on the first page of this issue of the Bee Journal; and the third is a good group-picture of those attending the Los Angeles convention. The prices of these photographs are 75 cents each, postpaid. We can supply them at the price mentioned, should any desire either one or all of the pictures. The Grand Canyon picture is the best we have ever seen of that wonderful spot.

Henry A. Kunze, of Monroe Co., N. Y., wrote us Oct. 5, when renewing his subscription:

"The honey crop was a failure here this season; 400 pounds from 18 colonies, spring count. We hope for better results next year."

General Manager N. E. France, of the National Bee-Keepers' Association, seems to be a very busy man these days. He has a case to prosecute in Colorado, one to defend in New York, and one to defend in Texas, besides his annual report to get out. We saw enough of the General Manager business under the late Thomas G. Newman, to know that it is no easy job, if properly taken care of. And Mr. France will do his best, all can depend upon that.

Mr. W. A. Pryal, of California, sent us the following clipping from the San Francisco Examiner, dated at Ventura, Calif., Sept. 22:

"Mrs. J. M. Owens died this morning from blood-poisoning. For several weeks she suffered intense pain with neuralgia, and decided to have several teeth removed. The teeth were extracted and blood-poisoning set in immediately. Her condition rapidly grew worse until death came. She was the daughter of the late R. Wilkin, who was one of the wealthiest bee-men in this section."

Mrs. J. F. McIntyre is a sister of Mrs. Owens, the unfortunate lady mentioned in the clipping, both being daughters of the late R. Wilkin, who was noted for his famous yields of honey. The case of Mrs. Owens certainly is a sad one.

A Big Basswood Log Contract was reported last month in a Wisconsin newspaper, to the effect that a certain manufacturing company of that State had arranged with parties at Escanaba, Mich., for 1000 car-loads of basswood per year for seven years. "To complete the contract will require 40,000,000 feet. As logs are becoming scarce the contract will no doubt prove profitable." So says the report.

We suppose none of this lumber will be used for sections for bee-keepers, as the firm mentioned does not manufacture bee-supplies. It seems a pity to use up the scant supply of basswood left in the country for anything else but sections, when, perhaps, some other kinds of wood will answer about as well for the other purposes. But no one can interfere with the general use or destruction of the basswood timber.

A Monkey-Wrench Story has been sent to us by Mr. C. E. Kemp, of Maryland. It is "respectfully dedicated" to our "Svede" friend, Yon Yonson, who has written for the American Bee Journal some wholesome nonsense, which some one has said is "relished by the best of men, now and then." Well, here's the

MONKEY-WRENCH STORY:

The American Machinist is responsible for the publication of the following story, reporting it as received from a Canadian friend. The source of the story is unknown, but the occurrence is credited to the Pincher Creek district. Two travelers were driving through that section and met with an accident to their buggy. One of the two went to a near-by shanty, the occupant of which happened to be a Swede, and asked if he had a monkey-wrench. The traveler was astonished to receive the following reply:

"No, ay got a cattle-ranch; may brother, Ole, haf a horse-ranch; Nela Nelson haf a hog-ranch ba de crick ofer; and a Yankee feller haf a sheep-ranch but 5 mile down de road; but ay bet no feller fool enough to start a monkey-ranch in dose country."

That Sunday at Grand Canyon.—Dr. Miller writes us as follows concerning his conduct on that day:

Mr. Editor:—I must enter a mild protest against being held up as a frightful example of laziness. On page 612, in telling about that Sunday at Grand Canyon, you say, "Dr. Miller and the women-folks evidently decided to take things easy, and rest." Now, if you had said I was a little bit lazy, or just "mejum" lazy, I could hardly object, for I must confess there are times when I have more or less longing "to take things easy, and rest," albeit the opportunity for such a thing seems to be a constantly receding quantity. But the idea of being so outrageously lazy that, after having traveled 2000 miles from home, I should miss the chance to see one of the greatest wonders of Nature just because I had "decided to take things easy, and rest"—well, Mr. Editor, I must draw the line at that.

I can't say just what was in the minds of the other women, but the one and only reason I did not yield to the strong desire to "go with the multitude," was because it was Sunday, and I didn't believe it would be the right thing to spend it out among the rocks and coyotes in a way I wouldn't dream of spending it at home. If others thought the Grand Canyon was outside the jurisdiction of the fourth commandment, or if they thought it was worshiping God to tramp all over creation on Sunday, that's their affair, not mine; but please, Mr. Editor, don't say that I missed the one chance of a lifetime to see the Grand Canyon just because I "decided to take things easy, and rest."

C. C. Miller.

We think Dr. Miller did just the right thing for him, in not going "all over creation on Sunday." There were also other men of our party who did not go down into the Canyon. We believe we indicated all who did go down, however. And so far as we know, none of them regretted having gone. But we would not attempt to decide for others as to the right or wrong of going down into the Grand Canyon on Sunday. As for ourselves, we do not think it was wrong for us to go. Had we thought so we would have remained above with Dr. Miller "and the other women." *We* certainly would not object to taking a long walk at home on Sunday, even when there is nothing special to see; and to take a long walk down and up the Grand Canyon on Sunday, and see "one of the greatest wonders of Nature"—well, we did it. But it's too long a "walk" for every Sunday!

The Delineator for November.—In the November issue The Delineator sustains its recognized position as the foremost fashion publication, and one of the high-class literary magazines. Excellent reading and refined art supplement, the display of Winter fashions, which are more charming than at any previous time. In fiction there is the second installment of The Evolution of a Club Woman, the bold narrative of a woman's experiences in clubdom, purporting to be fact; a clever short story by William MacLeod Raine, entitled An Unpremeditated Engagement; An Interrupted Honeymoon, by Lillie Hamilton French, a pathetic incident of a little Yorkshire terrier; and a Western story by Minna C. Smith. In the second of his remarkable photographic articles, J. C. Hemment relates some of his thrilling adventures with the camera. N. Hudson Moore has a strikingly-illustrated paper on Chrysanthemums, and in the "Miladi" paper Clara E. Laughlin writes of Conflicting Tendencies in early married life. A House Small but Artistic is pictured and described by Alice M. Kellogg, and in "Carlotta and I" Miles Bradford tells the story of an old-fashioned Thanksgiving. For the children, there is a Firelight Story, by Livingston B. Morse; entertaining Pastimes, by Lina Beard, describing the construction of the Statue of Zeus at Olympia; an amusing story by C. V. C. Mathews, called, We Meet Monsieur Daguerre, and a Sewing Lesson. In addition there are numerous articles by experts treating problems of the home and household.

Honey as a Health-Food is the name of a 16-page leaflet (3½x6 inches) which is designed to help increase the demand and sale of honey. The first part is devoted to a consideration of "Honey as Food," written by Dr. C. C. Miller. The last part contains "Honey-Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by every one who has honey for sale. It is almost certain to make good customers for honey. We know, for we are using it ourselves.

Prices, prepaid—Sample copy free; 10 for 20 cts.; 25 for 40 cts.; 50 for 70 cts.; 100 for $1.25; 250 for $2.25; 500 for $4.00; 1000 for $7.50. Your business card printed free at the bottom of the front page, on all orders for 100 or more copies. Send all orders to the Bee Journal office.

◆

Why Not Help a Little—both your neighbor bee-keepers and the old American Bee Journal—by sending to us the names and addresses of such as you may know do not now get this journal? We will be glad to send them sample copies, so that they may become acquainted with the paper, and subscribe for it, thus putting themselves in the line of success with bees. Perhaps you can get them to subscribe, send in their dollars, and secure for your trouble some of the premiums we are constantly offering as rewards for such effort.

◆

Amerikanische Bienenzucht, by Hans Buschbauer, is a bee-keeper's handbook of 138 pages, which is just what our German friends will want. It is fully illustrated, and neatly bound in cloth. Price, postpaid, $1.00; or with the American Bee Journal one year—both for $1.75. Address all orders to this office.

◆

The Premiums offered this week are well worth working for. Look at them.

Convention Proceedings

THE LOS ANGELES CONVENTION.

Report of the Proceedings of the 34th Annual Meeting of the National Bee-Keepers' Association, Held at Los Angeles, Calif., Aug. 18, 19 and 20, 1903.

Continued from page 663.)

Mr. Moe—After listening to Mr. McIntyre's experience in hiving bees, I would like to ask if he has any difficulty with after-swarming, or secondary swarming; and, also, if he has had any experience with young queens reared in the same colony. If they have any disposition to swarm during that season, as well as introducing his queens.

Mr. McIntyre—I have very little difficulty with after-swarms. That is why I use the queen-excluder. By setting the brood-chamber out with a very few bees in it, and then introducing a cell ready to hatch, there is hardly ever an exception to this rule.

Mrs. D. A. Higgins—I always think the crossness depends a good deal upon who handles them, and how they are handled. We never have any trouble with cross bees. I think the way they are handled has a great deal to do with it.

J. K. Williamson—I wish to ask if there is any Cyprian blood in nearly all of the light-colored strains of bees. It always seems to me they are crosser and more vindictive than any of the dark strains that I get.

A. I. Root—In Cuba, last winter, they complained a great deal that when they had a long continued flow of honey the worker-bees would fill all the cells with honey to the exclusion of brood, and the colonies would get depopulated. I laughed at the idea that that would stop queens from rearing brood. It seems as though the bees filled up everything with the honey. I said to them, We want some Holy Land bees. I used Holy Land bees years ago, and they would go to work at the approach of winter and fill up the cells with brood. I would like to ask if you have any trouble in California, when there is a very large flow of honey, with the bees filling the combs with honey to the exclusion of brood?

Frank Benton—I have shown this condition with any of these Eastern bees, and I ought, perhaps, to supply from the Cyprians and Holy Lands to a certain extent. I merely intend that, I think, as crossing material and breeding material. the Cyprians are to be preferred to the Holy Lands, and that rather gentle Cyprians can be found on the average. Now, when it comes down to the question, any of these Eastern races will introduce that element of prolificness, swift flight, strong wing-power, energy in collecting, and if we can only avoid that sharpness of disposition by the introduction of the gentle qualities from the male element, then we could meet all these conditions and get bees where there was an early flow, and we want them to go through the winter in powerful colonies; where the flow comes especially during the winter they would be especially valuable in keeping up the brood-rearing, storing their surplus in supers, and keeping the body of the hive well filled, whether the honey is coming in in that manner.

Another point, their continuous industry causes them, when other bees slack up and do nothing, to keep up enough to keep up the honey. That is not the case with the Italians. Then their lack of hardiness causes them to dwindle easily, and we prevent this by combining with one of the Eastern races, whichever one of them may be preferred.

Now, just one word more. I mentioned the Caucasian race of bees. I have had very little experience with them, but I am very favorably impressed with them, and it is quite possible that we will have there a moral element that will be preferable even to the Carniolans.

T. O. Andrews—It seems to me that we are devoting a sight of time to questions that have been gone over time and time again. There are a thousand and one imortant questions relative to foul brood, treatment of foul brood, and things that are vitally important. As to this question of Cyprian bees—"Holy Terrors," I call them—I was very glad when they decided they would not live in my climate. Every one to his notion in this, just as in the matter of the hot knife or cold knife. I move that we proceed to the election of officers, and then to the question-box.

The following officers were then chosen to serve for the year 1904:

President—J. U. Harris, of Grand Junction, Colo.
Vice-President—C. P. Dadant, of Hamilton, Ill.
Secretary—George W. Brodbeck, of Los Angeles, Calif.

Proceeding to the question-box after a recess, with Mr. T. O. Andrews in the chair, the first question read was:

METHODS OF RUNNING OUT-APIARIES.

"Which system is best for out-apiaries, hired help, or furnish bees and everything, and give a manager a percent of the net profits?"

E. T. Abbott—May I give my experience a little with hired help? On general principles, it is absolutely worthless. Once I turned over to a man 150 colonies of bees. I agreed to pay him $30 a month and his board. I had no way of telling whether he earned his board or not, because I was away for about four weeks. On my return, I found that he did not know where a single colony in the yard was located. The colonies were all numbered, and for quite a little while I manipulated the bees from my location, saying, No. 3 would do so and so, and so on, and I told him that the colony of fine Carniolans should not be permitted to swarm, and that they were not to be divided until absolutely necessary. When I got home, my wife said that a swarm of bees was hanging on a tree outside, and I went out in the morning and put a swarm-catcher under them, when I discovered my $10 queen had been hanging in a tree all night. When I asked him what had become of the colony of Carniolans, he said he did not know; and he was a very good young man and wanted to look after my interests. That is the reason I gave up manipulating bees. Whenever I have undertaken to hire a man to keep bees, I have become convinced that I could not hire it done. That has been my experience.

Mr. France—This subject, to those keeping a good many bees, is one of vital importance. As Mr. Abbott remarked this morning, it is getting to be everything on the union line. Labor is a big figure, and to get labor on the farm is not so difficult as in the bee-yards. I find I must either hire them at a definite stated price, they to do as I direct, or they must work upon a commission for a part of the product of the apiary—one of these two methods. In my own locality I am fortunately situated, having one of our State Normal Schools, and students, especially those in the third year, anxious to stay in the vicinity over the summer vacation, and the busy season comes just at a time when their summer vacation is on, and I take in these graduate boys as my assistants. But, generally speaking, I question if it is desirable to take the ordinary laborer, as we find him, on a commission basis. Their whole interest, then, is as to the number of pounds of honey they can produce, and they may over-reach, and you will be sorry for the experience. I think this is largely a matter of locality.

H. H. Hyde—I would rather have a man work on commission than on wages.

Mr. France—Yes, sir; rather than work for wages, because if I am not there things will go on in an indifferent, careless way. On the other hand, if it is his labor, he is willing to work more than six hours a day, and as a labor union dictates.

Mr. Williamson—In both systems, whether you hire the man or whether you rent the bees to him on a commission, the principle involved is the same. A man is trying to get all out of the bees he can. His interests and his employer's are antagonistic, and they can never be harmonized. The laboring man sells his labor and renders only so much as he must in order to hold his job. It is a business proposition with him; and, on the other hand, it is a business proposition to get all out of a man he can. There never will be harmony between employer and employee; it is impossible.

F. G. Corey—If you want to run an engine, you must have an engineer. A railroad company can trust a man a thousand miles away, if he understands his work. If a man has no taste for that kind of work he is not a bee-man. You can train men to work in the fields or the orchards. and they must be trained to be of real service in the bee-yards.

BEST BEE FOR COMB HONEY.

"What is the best bee for the production of comb honey?"

Mr. Hyde—Either Italians or Carniolans.

Dr. Miller—I say, *worker*-bees!

A. I. Root—Dr. Miller's hybrids!

BEST BEE-ESCAPE.

"What is the best bee-escape?"

Allen Barnett—I do not know whether my experience counts for more than others in that line or not. I work for comb honey, and I like to get the bees out of the supers pretty well, so I don't use any bee-escape, only one of my own, and that is a common tent, such as is used by campers. I have one about ten feet square, and I get a couple of poles and leave an opening at the top of it, and then take common screen-wire and make a funnel, leaving one end of it large enough for one bee to get out. At the other end a cloth that will sit securely on the tent, so that the sides and ends will lie down on the ground a few inches, so that the bees can not get under. I use a little smoke, and carry the super with the combs in the sections, and stand it in the tent on end—not on the side, but on the end, so that the sections stand up and down. I place another one close to it, but not close enough so that the bees can get through. You can stand them in rows. In a tent ten feet square I can put as many as 50. All that you take off before noon will be out in a few hours, and I can work until 3 o'clock in the afternoon very well with that kind of bee-escape. As quick as you go in, close down your curtain, so that the bees can not come in. If you don't work later than 3 o'clock in the afternoon, the bees will come out and go to their homes. Sometimes bees will come from the outside and go down. In order to remedy that, I make another cone of the same size and shape, allowing the space of 6 or 8 inches above it. They will then crawl out of the first and into the second, and they seem to become confused and go back out. This is the best bee-escape I have ever tried in connection with taking off comb honey. I have not used the Porter, but the old-fashioned ones. The bees do not have to crawl up through their supers by being stacked up.

Dr. Miller—The question as to the bee-escape depends upon the intention of the proprietor. If he wants to get his bees out of the super over night, or leave them as long as he has a mind to, I don't believe there is anything better than the Porter, because he can put it on and leave it, although it may be a question between the Porter and the Lareese. That has been used so little, perhaps of late, that not many would remember the name, but Mr. Reese combined the names of Larrabee and Reese in the name. But if the escape is meant to get the bees out of the super so that the proprietor may get them from the out-apiary and take them home, then the Porter or Lareese, either, is too slow, and the plan already mentioned is good. Let me give you one hint as to that. All that is required in that is to have a tent large enough to hold the supers. Pile them one upon top of the other crosswise, then that allows them to escape. Then the robbers, if it is a time when the robbers are troublesome, every time you go in there to take a fresh super, will try again. You will notice that the bees always attack your tent from the side where the wind blows. Have your door on the opposite side, and they will not come in. For a good many years I have used what I think is more convenient, and it is given in Root's "A B C of Bee-Culture" as the "Miller Tent Escape," and that is simply a combination of a robber-cloth and a cone. The robber-cloth is quickly thrown over the pile of supers. Throw the robber-cloth over them like a tent, and then when you are ready to go home you will find all the bees are out. That, I think, is the most convenient way of all.

YOUNG QUEEN LAYING IRREGULARLY.

"Is a young queen which starts out like a laying worker, scattering the eggs and mixing drone and worker eggs badly through worker-comb, worth keeping, or should she be killed at once?"

Dr. Miller—Try her again; give her another trial.

SELF-SPACING FRAMES FOR EXTRACTED HONEY.

"In producing extracted honey, has the self-spacing frame any advantage over the ordinary hanging frame? About what percentage of producers use self-spacing frames?"

N. A. Kluck—Self-spacing frames have a great many advantages. There is a great deal of difference.

J. M. Hambaugh—I think I am qualified to speak of the advantages and disadvantages of self-spacing frames. I have been in the business of inspecting everybody's apiaries in San Diego county, and I think we have about as great varieties as any State in the Union. If you could go with me and see the disadvantages of the different kinds of self-spacing frames, you would everlastingly place condemnation on them. If you want to examine rapidly, and get over a good deal of space in a day, you will almost curse the time you ever saw a self-spacing frame And it is a great disadvantage when it comes to rapid handling and inspecting of frames throughout the country. If I had my way about it, I would everlastingly do away with self-spacing frames. That has been my experience, and I think that of a good many others. There may be some advantages for the time being, but wait until you want to take the frames out, and get at them rapidly. Then you will find they are a great disadvantage. With the other frames, you will find by placing your fingers right, you can lift them right out. But self-spacing frames you will have to pry out the first ones, until you can lift the frames up and get them out. Otherwise they are very hard to get out.

Mr. Abbott—How about the self-spacing hive, not a frame?

Mr. Hambaugh—I have never had any experience, if you mean hives.

Mr. Abbott—Yes, sir, I mean the body of the hives.

Mr. Williamson—All the experience I have had fails to apply when it comes to a movable frame. For rapid handling, you must have a loose-hanging frame.

Mr. Hyde—I am for a hanging frame, first, last, and all the time.

Dr. Miller—There are self-spacing frames and self-spacing frames, and it does not necessarily follow because you found a hive—and you will find them—where the frames are stuck fast, that all self-spacing frames act that way. The only thing is to have a sufficiently small point of contact. Generally you have that too large. I would like to ask Mr. Hambaugh the smallest point of contact he found between any of those frames.

Mr. Hambaugh—After they were in use a certain length of time I found all of them exceedingly hard to pry apart.

Dr. Miller—If we let any large amount of space come in contact that is bad. But did you find any of them touching at only a single point above and below?

Mr. Hambaugh—No; all touched about half way.

Dr. Miller—If there is only a single point at the top you will find those will be just a delight to handle. You will have no trouble in getting them out. The bees can not accumulate a lot of propolis there. We ought to have—I have tried hard to get that—we ought to have a spacing-nail that would automatically go in, with a head ¼-inch thick. I can not get them inside of that. I use a heavy common wire nail, and, with a gauge, drive it in so that it projects ¼ inch. A staple would answer the same thing.

Mr. Hambaugh—To one side or another, enough so that they would go past each other.

Mr. Hershiser—Just as fast as I pull these frames out of the hive I go and get a claw-hammer and pull the nails or staples out.

Dr. Miller—Anybody that does not like them—there is no law against pulling them out.

Mr. Abbott—I might say I have been using a hive for more than ten years in which the hive spaces the frames. I pronounced the Hoffman frame a humbug ten years ago, and I actually would not have one if I were manipulating it; but why one should suppose that a frame can not be spaced any other way when it can be accurately spaced with metal is beyond me. The "St. Joe" hive has frames which are spaced in that way, and you may nail your frames and not touch them for ten years, and you will have no trouble to lift any one of them out with ease. That hive has been sold for about 15 years, all over our Western country, and I have heard of no complaint of frames being stuck fast.

Mr. Hambaugh—I did run across a hive of that kind from which it was simply impossible to remove the frames. They had gotten so propolized, and we had so everlastingly much trouble trying to get those frames out and overhauling them, that the owner declared he would do away with them. If that is the "St. Joe" hive, I don't want anything to do with it.

Mr. Abbott—That is not the "St. Joe" hive.

Mr. Hyde—We once bought about 180 hives—I don't know whether they were the "St. Joe" hive or not, but when I wanted to get the frames out I had to move one at a time.

J. A. Delano—I think if we used tin right on the end of our hive where the frame is, so that we could slide our frames back and forth, then get a straight top-bar and a straight end-bar, it does not matter what width we take (and not use any spaces of any kind), we will find it will suit all localities better. In our locality, I do not think, of all the plans suggested in this discussion, that any of them would work. They will get gummed up.

The convention then adjourned until 7:30 p.m.

(Continued next week.)

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

A Sisterly Suggestion to a Brother.

I have been in the bee-business three years. I had 200 colonies last season, but lost some this spring. The honey crop is small with us this season, but of good quality.

I enjoy reading the Sisters' letters.

I take all the care of the bees and honey, making shipping-cases, etc.

I can sympathize with the brother from Delta Co., Colo., as I know what it is to do housework and care for bees at the same time. If he will send his full address to the American Bee Journal I will send him my address, and perhaps we can arrange it for one to take care of the bees while the other one looks after the bread, as I am a widow.

Bent Co., Colo., Sept. 22. MRS. C. HENRY.

Good Season—Changing Supers.

This has been a very good honey season, although the weather was not the most favorable—too cool to secrete the honey. Clovers blossomed well, but basswood blossoms lasted about 10 days.

I have sold $91.16 worth of honey from 24 colonies, besides saving enough for ourselves and giving away quite a little.

I have kept bees many years, but I feel I know but little about them yet, and would like to ask: If a super is taken from one hive nearly full of honey and bees and placed on another, what becomes of the bees? Do they go down and out, or do they help finish filling the sections with honey?

I found a copy of the American Bee Journal of 1888, but it is quite inferior to the present paper of the same name. I find it very interesting and profitable to bee-keepers, especially the Sisters department, which I hope will continue to grow. MRS. R. A. HUNTINGTON.

Genesee Co., N. Y., Sept. 30.

It depends upon the age of the bees. Most of them will stay where they are put, while field-bees that happen to be in the super will return to their own hive when they fly out, unless there has been several days of wet, cloudy weather so they could not fly. In that case most of them will, no doubt, begin to feel at home where they are.

Sowing for Bees—An Elder Sister.

When I read Mary E. Avera's letter (page 424), I thought how much she was like me, only she is on a ranch farm and I am on a little Jersey farm. I do all my work, having no one to help me. She says she makes chicken-coops, so have I, and chicken yards. Her husband says when she gets hold of anything she don't know when to let go; that is my nature, too.

One sister says she makes her Hill's device, to go over the bees, out of barrel-hoops. I have made mine ever since I kept bees.

Thank you, Sister S. M. Payne, for telling how you take your honey off. I did not know of that way, and I have only one bee-escape.

I can sympathize with you Sister Payne, for I have not been able to get around without a cane for five weeks; have the same trouble. My bees do not seem to appreciate my hobbling among them with a cane. They have not had the attention they ought to have, and are not as good-natured as they were when I was with them more and talked with and to them.

I have undertaken too much. I planted an acre of corn, dropped and covered it myself, also quite a patch of sunflowers, and want to sow a patch of millet, too, and have seeded the pear-orchard to crimson clover, so that next summer the bees will have plenty. The first of March I planted the piece I am going to seed down, then I kept planting until the last of June, so they would have flowers to work on for a long time, and the pigeons and chickens will enjoy the seed this winter; but I notice since the spider-plant has commenced to bloom they do not seem to pay so much attention to the sunflowers, but are very busy on the spider-plant, especially in the forepart of the day. I never could succeed in getting it to grow before, until I read in the Bee Journal that it had to be sown in the fall. The patch looks pretty—it is so full of bloom.

The bees work on lima beans, too; I have a patch of them, and also of tomatoes for the canning factory, besides the things I am raising for myself. So you see I have undertaken a good deal for a woman alone, who will be 75 years old in December.

I always thought the Bee Journal very good, but since Mr. York has been so kind as to give the Sisters a corner to ourselves, it has added a great deal more to its interest. It seems natural, I suppose, for us to look at that part first; I am sure I always look there, and if our Editor had not given us a corner the bee-brethren would not know what we can do. I guess I am the only sister that has ever made hives, and I have a good many on hand, which is well, as I have lost the use of my right eye, and it is a great disadvantage in bee-work, as well as other work. Some other time I will have to tell about how my bees have worked and stored. SARAH J. GRIFFITH.

Cumberland Co., N. J., Aug. 10.

Bees on the Farm.

Our home is in a place that is comparatively new, having been settled only a few years, and the farms that we will consider have 20 or 30 acres, and many of them less, of plowland, and the rest is hay and pasture and woodland—just room for a good garden and orchard, for potatoes and corn, and a little grain; just what stock is necessary, 50 to 100 hens, and 2 to 40 colonies of bees. Of course, there are some big farms here, but we will let some one else talk about big farms.

Here, in northern Minnesota, we put our bees out in the spring, the last week in March or the first week in April, and we look them over, help the weak ones, feed the hungry before the rush of the spring work begins; and then again in two or three weeks, but they don't seem to need much care till they begin to swarm, the last of May. By that time the spring planting is well out of the way; chickens hatched, and almost able to take care of themselves. The busiest time with bees is right in hoeing time, but we find we can leaving hoeing a little while at any time.

I should think there would be a conflict between bees and strawberries, but we have had only a few strawberries since we kept bees. We can manage the haying all right, and the raspberries and currants, and the worst trouble with the bees is over before the plums and apples are ripe.

The earliest blossoms our bees find are such as willow, tag-alder, soft-maple, and box-elder. There is an abundance of these trees, and they give the bees a good start. Soon after the tassel-flowers are gone, the plum blossoms appear, and wild cherry, and apple, and dandelions. We have the largest, finest dandelions in the world, and they blossom by spells all summer. We don't get much nice honey from the early blossoms, but we have had a little that was very fine. I should think the honey from the apple-blossoms would be very nice, and it may be when alone, but plum and cherry honey seems to taste more of the bark than of the blossoms.

We would like to get through swarming in time for white clover, but we don't, for they keep on swarming through June and July, and a few in August, and sometimes in September.

We have tried artificial swarming of bees only a few times, but have had very good success when we have tried it, and it might save a good deal of work.

One swarm came out August 6, 1900, and filled the new hive and stored 23 pounds of surplus. Once in a while a swarm comes out in September and builds up well, and goes into winter quarters in good shape.

White clover is very plentiful in our section, in the roadsides, pastures, and unused corners, but I suppose our very best honey-plant for rushing is the basswood.

About a week or ten days after our basswoods blossom, they begin to blossom on the shore of Mille Lacs, about a mile away. So, in a good year, we have a long basswood season. The bees work hard on the corn and catnip. There is not much buckwheat raised near our home, though I think it pays to have a few small patches near the hen-house. Then the bees can gather the honey, and the poultry will harvest the buckwheat. It would piece out nicely between basswood and goldenrod, for the alsike is uncertain, and blossoms only by spells.

There are lots of wild asters, and we get a great many pounds of bright goldenrod honey, and dandelions blossom till the bees are put away for winter.

We put our bees in the cellar about the last of November, and we have found that a swarm that goes into winter quarters in good shape is pretty sure to be all right in the spring; most of them are rearing brood and have young bees hatching when they leave the cellar.

We keep our bees in the cellar under the house, with the potatoes and other vegetables. We kept the temperature about 38 degrees last winter, and we have had better success at that temperature than warmer. We look at the thermometer every time we go down cellar, and open or close the ventilator to keep it right. and it does not take much time, while the better the cellar is for bees, the better it is for the vegetables and apples.

We got our first three swarms of bees four years ago; and we don't know of any in the county before that. Now we have 36 colonies, and about half of our neighbors have from two to five colonies.

We sell more than half of our honey at home, and the rest in Aitkin. I believe the extracted honey sells best, but it all sells readily at 12½ to 15 cents a pound. It is very seldom that a neighbor comes in without inquiring about the welfare of the bees, and the prospect for honey, even if there is not time to ask about the corn crop, or the melons or apples.

Whatever helps to make this world and humanity better and sweeter is always a blessing. We always love and appreciate anything that is sweet, and it seems to be the duty of the bee to search out and gather sweets that would otherwise be unnoticed and wasted, just as it is the duty of every human being to search out and remember the mercies and blessings so abundantly bestowed by our Heavenly Father.
—Read at the Minnesota State Convention.

Aitkin Co., Minn. ALICE HAZELTON.

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, Ohio.

BEESWAX-EXPERIMENTS.

The Texas wax-experiments, page 564, told us what we already knew, for the main, that the percent of dirt in a comb increases with age. Like a spoiled child, I'm going to cry for what they didn't tell us. I want to know whether the *total amount* of wax in a comb doth with age increase, decrease, or remain stationary. If they had told us that it would have been something like. Until we find out that it isn't so, we naturally suppose virgin comb to be all wax. 'Spects that lots of the brethren still need to be informed. Texas finds that virgin comb has 88 percent of wax. But they used foundation in their virgin comb; and I incline to protest pretty loudly against such hybrid virginity.

EXPERIMENTS WITH HIVE-COVERS.

That any well-made cover with a shade-board added protects better than a complicated cover alone, is a conclusion of value—and a conclusion that seems reasonable, also. They didn't find out exactly how much heat went through each individual cover *in a given time*. That's quite an important item. Perhaps you don't get my idea. Like this: Two tubs each has a small leak; but one small leak is only half as large as the other small leak. Sink these two tubs half down in water, for it to leak in, and *let them alone long enough*, and you'll fail to find out any difference in the leaks. Water will rise nearly to level in both. Similarly in these left-all-day empty hives, temperature finally got to nearly the same level in most of them; but I fear the circumstance is misleading. Suppose they try next time how much ice melts in each chamber in one hour. Page 564.

HYBRIDS OF PLANTS AND ANIMALS.

An incorrect statement, on page 566, needs spotting. Very true (and an important "very true"), that animals, and plants also, have two diverse kinds of hybrids, according to *which way* the cross is made. Not altogether unreasonable to say that neither is the true hybrid, if the lack could be remedied readily—as it can not. Mr. Newell's true hybrid is not a true hybrid, either. The same cause of diversity, only in much less degree, remains. C—I x I—C must not be expected to be exactly the same as I—C x C—I.

NUMBER OF BEES USED UP IN A POUND OF HONEY.

Dr. Miller's estimate of 500 bees spent for a pound of honey is good as a starter—with the admission that they sometimes get much more. On similar lines I'll proceed to say, the bees of a summer may total 100,000. If all are spent, so as to average the rate named, it will be 200 pounds. A good many of us do not get so much as the surplus off a 200-pound income. Page 568.

OUT-APIARIES AND BRUSHED SWARMS.

Stachelhausen, it seems, has run an out-apiary 11 years by brushing swarms a little in advance of Nature. Still thinks the method one of the best, but finds a great deal depends upon locality and circumstances.

And when he has a virgin queen in a hive and wants her killed, he can attain that, nine times out of ten, by a simple temporary shifting of hives near the close of the day—getting in a good lot of field-bees from a colony with a laying queen. The sweeping success of this, in Stachelhausen's hands, surprises me. Perhaps he only expects it of rather weak colonies. Page 580.

SWARMING AND NECTAR-GATHERING.

A. E. Hooker, on page 582, seems to have my experiences pretty frequently. Not sure to escape swarming when the flowers fail for a spell to yield nectar. And the dictum of 8 or 9 days between prime swarm and after-swarm wholly unreliable. He finds more cases less than 8 days than I do. The average with my bees is more—in many individual cases much more.

In caging queens to prevent swarming, if the bees swarm precipitately when their queen is released, that looks to me like pretty good evidence that they were thinking about swarming more than about honey-storing before—*i.e.*, not doing their best.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

On the Mercy of the Court.

This is to be an apology, but I'd like to offer a prize for a form of words adequate to the occasion. Some of the questions answered in this number should have been answered long ago, but were buried under a mass of letters and papers where they slept until now resurrected to haunt me like accusing ghosts. To say I regret the delay doesn't at all meet the case. If I should burn the letters in hopes that the writers would think Uncle Sam had lost them, it would hardly help matters, for I'd rather stand all the reproaches that may be heaped upon me than to bear the lashings of a conscience constantly reminding me that I am a liar and a sneak. I'd like to promise that I'll never do it again; but I don't dare to. I don't know but I may. The trouble is, that I'm so crowded I don't do things as methodically as I should. I'm told I ought to give up some of the things I'm doing, but which? Some of them I hardly *can* give up, some of them I don't like to, and some of them I won't.

All I can do in the present case is to throw myself on the mercy of the court, and although not deserving it, still to ask forgiveness.

C. C. MILLER.

[We feel sure all who may have been unintentionally neglected will be glad to accept Dr. Miller's humble apology. We know he is a very busy man, and trying to keep up with his work as best he can. We can sympathize fully with him, as for years we have had altogether too much to do in order to do some things in as good a manner as they should be done.—EDITOR.]

Three or Five Banded Bees.

I want to Italianize all of my bees, and rear the most of the queens. Which would you buy to start with, those with three or with five bands? MISSOURI.

ANSWER.—Hard to tell. The best of either kind is better than the average of the other. Taking them as they average in general, very likely you will do as well with three-banders.

Spider-Plant, Blue Thistle and Alfalfa.

I notice in reading "A B C of Bee-Culture" that there is a plant called spider-plant. Will it grow here? Where can I get some seed. What time in the year should it be planted?

Will the blue thistle grow here? Also alfalfa? Where can I get it? I have tried and failed. NORTH CAROLINA.

ANSWERS.—1. The spider-plant will probably grow with you if sown in the spring, but you will hardly find it worth the trouble. You can get seed from the A. I. Root Co.

Blue thistle will likely succeed with you, but not alfalfa.

Keeping Bears Out of the Apiary.

I intend to start an out-apiary at a place infested by bears. As you have seen and spoken of California bee-keepers lately, perhaps you could inform me how they keep them out of the yards. OREGON.

☞ ANSWER.—I don't remember to have seen any special means mentioned to prevent the encroachments of bears except in one case. If I remember correctly, in that case the hives were up in a tree, and a platform was built about the tree a few feet above the ground. Of course, a bear could not pass the platform; but such a plan would hardly be practicable on a large scale. If any of the constituency have any means of prevention to offer, I yield the floor.

Cost of Bee-Supplies—Mailing Queens—Starting with Bees.

1. What would be the expenses, per pound or per colony, for supplies for an apiary of say 100 colonies, producing 45 pounds of extracted honey or 30 pounds of comb honey per colony?

2. What is the average life of a dovetailed Langstroth hive, with reasonable care?

3. Can queen-bees be shipped by mail with safety across the continent? Are they so shipped?

4. How many colonies would you advise a man to start with who intends to devote his whole time to bee-keeping? CALIFORNIA.

ANSWERS.—1. If the extracted honey is put in 60-pound cans, it will cost for cans by the quantity about ⅝ of a cent for each pound of honey. For comb honey, sections and foundation will cost about a cent a pound.

2. Varies with climates and seasons. At a rough estimate, 25 years.

3. Yes.

4. As a general rule, a man will do well to begin the first year with 2 colonies, although special conditions might make it advisable to vary greatly from that.

Fence Separators or Solid Ones.

Will the bees work better and quicker in sections with fence separators than the old-style solid ones? OHIO.

ANSWER.—It will make no difference.

Uniting Bees—Wintering—Feeding Glucose.

I had a small swarm of bees to issue, which I decided to unite with a weak colony I had in my yard. I raised the cover and blew smoke over the frames and in at the hive-entrance of the weak colony. I then shook the bees of the swarm off the limb in front of the entrance. They entered the hive nicely, but the bees of the weak colony fought with such fury that they killed half of the bees of the swarm in a few minutes. Some of the bees of the swarm left the hive and entered the hive of a strong colony that stood near, and were welcomed by the bees of the strong colony.

1. Why did the bees of the weak colony fight those of the swarm? And why were they welcomed by the bees of the strong colony?

2. I notice yellow-jackets entering some of my hives. Do you think they are doing mischief? The bees do not seem to notice them.

3. I have been wintering my bees with a super filled with chaff next to the brood-chamber. Is this a good practice? Should there be a cloth placed over the brood-frames under the chaff super?

4. Is glucose fit to feed bees for winter stores? VIRGINIA.

ANSWERS.—1. I don't know, but I'll make something of a guess. A weak colony, as well as a strong one, may resent the intrusion of strangers, the case being worse if the weak colony has a laying queen and the intruding swarm has a virgin. The manner of their entrance has something to do with their reception. When the swarm attempted to enter the hive of the weak colony, the bees probably marched in with a bold air, as who should say, "We have as good a right here as you, and we're coming in;" and the bees of the colony said, "We'll see about that." But the bees that went to the neighboring strong colony went as supplicants, and stood at the entrance fanning, as if to say, "Please let us in, we've lost our home, but if you'll let us in we'll work all the rest of our lives for you, just as if born here."

2. They're probably after honey, and are not likely to get off scot-free for long.

3. It's all right if the chaff doesn't sift down among the brood-combs; the cloth will prevent that.

4. No, no; glucose is not a fit thing to feed bees at any time or under any circumstances.

"Rosemary Cure" for Foul Brood.

During the past year I have seen several articles in the American Bee Journal concerning the "rosemary cure" for foul brood. Is it a sure cure for the scourge? Do the fumes of it do the work? PENNSYLVANIA.

ANSWER.—I don't know, but I have no faith in it.

Shallow Extracting-Frames—Cause of Balling Queens.

1. Do you use the shallow extracting frames, or don't you produce any extracted honey?

2. What do you think of frames 5⅜ inches deep for extracting?

3. On page 526, I notice an article which seems to explain the mystery of queenless colonies in the spring. Rough handling or jarring, he said, in early spring would cause the queen to be balled or killed. May this not be an explanation, or do you think there is anything in the idea? MICHIGAN.

ANSWERS.—1. I work only for comb honey.

2. The shallow frames are probably quite a little better for extracting; but the advantage is offset to some extent by the fact that frames can not be used interchangeably in either story. Yet the advantage of having clean frames that are used only for extracting turns the scales with some in favor of the shallow frames.

2. I have never supposed that loss of queens in my case could be traced to rough handling, but it is possible that there is more in it than I have supposed.

Using Foul-Broody Hives.

Is it safe to use hives which have had foul brood in them? These hives had foul brood in them three years ago; they were thoroughly cleaned and left on the stands ever since. How long is it known to stay in the frames in hives after it has once been there? WISCONSIN.

ANSWER.—Time can hardly be considered a factor in the problem, for foul-brood spores are very long-lived, lasting, no one knows, how long, but good authorities say that *hives* which have contained foul brood can be used at any time without disinfecting.

Foul Brood Inspector—Introducing Queens.

1. Is there a foul brood inspector for Indiana? I had lots of dead brood in my hives last spring, and I do not know whether it is foul brood or chilled brood, or some thing else. I introduced several queens in May, and had to shake the bees from the combs to find the old queens, and may have chilled the brood while doing so.

I am a beginner, and my bees are blacks. I had 17 colonies and wanted to Italianize them, and bought 7 Italian queens; they are all dead but one.

2. How soon after introducing a queen is it safe to open the hive to see if she is all right? INDIANA.

ANSWERS.—1. I know of no foul brood inspector in Indiana.

2. It is a little safer not to disturb the colony for three or four days.

Transferring Bees—Comb Honey or Extracted?

This has been a poor season for bees. I am trying to improve my stock all through. I have almost a non-swarming strain of bees, as I had only 4 swarms out of 25 colonies, and my bees have always stored honey. I have had from 50 to 205 pounds of comb honey in one-pound sections, but this year I have not had so much.

My hives are going down, and I will have to put the bees in new hives. I use the 8 frame dovetail hive, but my old hives are home-made; I bought them as they are, and the combs are so crooked and jammed up I can not get into the brood.

1. Would it be best to transfer in the spring, or wait until swarming-time and shake them and put a wire-cloth between the new and the old hives until the brood all hatches out, and then melt up the old combs?

2. Which would pay the best, to run for comb or extracted honey? We get 10 cents for comb and from 6 to 8 cents for extracted, and the

vessels cost a good deal to hold it. I have a home market for all I can get at these prices.

3. Which would pay the best to sell, comb at 10 cents here, or ship it to St. Louis and get 12 to 13 cents? The freight would be $1.25 per 100 pounds, and then the breakage and commission are to come out. ARKANSAS.

ANSWERS.—1. Better wait till swarming-time, but in putting the brood over wire-cloth, be sure to have at least a small entrance to the upper story, so the bees shall not be imprisoned there.

2. It is hardly wise for an outsider to attempt to answer questions of this kind. You see it isn't merely a matter of dollars and cents. Location has something to do with it, and the man has much to do with it. Taking the figures alone as you give them, it's a toss-up which is best.

3. Very likely there is more net money in the home market.

Sulphuric Acid for Cleansing Beeswax.

What kind of acid is used to clean beeswax? I had about 20 pounds of nice wax, for which I have a local trade here, and I put it into a wash-boiler with clean water to clean it still further. After it was melted I put it into a porcelain-lined kettle and cooked the water out, and now it is too dark for my trade. What can I do with it? From the comb to the present state it has been in new vessels only, and no chance for coloring from vessels. PENNSYLVANIA.

ANSWER.—The acid used is sulphuric, one part in 100 or 200—in severe cases one part in 50—being added to the heated mass. If that doesn't clear it probably nothing will. It is said by some that using well-water instead of rain-water accounts for the darkness of wax, there being iron in so much of the well-water.

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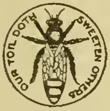
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FROM MANY FIELDS

Honey Crop Nearly all Sold.

My honey crop is nearly all sold. I had 15 barrels, and have 2 left. It was sold at 8 cents a pound. I hope next year will be as good as this. JAMES GROVER.

Brown Co., Ill., Oct. 8.

From an Old Bee-Keeper.

I have taken the American Bee Journal over 30 years, and have been handling bees for over 60 years, but I have been in the bee-business 40 years. I am just past 72 years old, and this year I have taken 13 tons of honey from 140 colonies, all extracted. The bees are all through and have gone to rest. I will begin to rear queens in January.

I have had bees near Lake Michigan, at South Haven. Perhaps you saw some of my specimens at the World's Fair, a bee-hive with a young ostrich on the top of it, and honey in ostrich egg-shells, and a good many other things.

I have had bees here for over 30 years, and a big lot of them at a time. DR. J. ARCHER.

Santa Barbara Co., Calif., Oct. 7.

Report for the Season.

My 40 colonies of bees stored 177 gallons of extracted honey and 499 sections of comb honey. GEORGE S. CRONE.

Schuyler Co., Ill., Oct. 13.

Bee-Keeping in Wisconsin.

Last Tuesday, Oct. 6, I bought Mr. Albert Armes' bee-yard, apparatus and good-will. The yard is 9 miles north of Boscobel, and has 130 colonies of bees. I have 114 colonies in my apiary at home.

The past season Mr. Armes took off 16 barrels, of 350 pounds each, of extracted honey, starting in the spring with 100 colonies. I took off 12 barrels, starting the season with 90 colonies; I took honey from only 80 colonies, 10 were transferred and gave no surplus. There are 225 colonies of bees in our city—too many.

We look for a good season next year, if it is good weather. Our basswood bloom was killed by late freezing last spring.

Grant Co., Wis., Oct. 10. L. G. BLAIR.

Amount of Water Absorbed by Honey.

In "Editorial Comments," page 627, I find this: "Good honey contains in the neighborhood of 1-6 of its weight of water; in a moisture-laden atmosphere it may attract to itself so much moisture as to be nearly half water."

Now we will take, for instance, a barrel of 1000 pounds of good honey with the bung-hole left open, said barrel being stored in a moisture-laden atmosphere. It would draw unto itself the difference between $\frac{1}{2}$ and 1-6, or which is $\frac{1}{3}$: $\frac{1}{3}$ of 1000 pounds is $333\frac{1}{3}$ pounds; the total honey and water in the barrel would then be $1333\frac{1}{3}$ pounds, would it? Of course,

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2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

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OWES HIS LIFE TO VITÆ-ORE.

Suffered for Years with Kidney, Heart, Stomach and Rheumatic Troubles – Made a Well Man Again by Vitæ-Ore.

COVINA, CAL.—I owe to Vitæ-Ore that I am alive to-day. For eight years I have suffered from KIDNEY TROUBLE, called by different names according to the whim of the doctor treating me, and I can honestly say that I never knew a well day. I became so bloated and fat that it was burdensome to me to make any exertion and a continual pain about my HEART never left me. It was impossible for me to lie on my left side, and sometimes I could not lie down at all. In addition to this I was tortured with RHEUMATIC PAINS, and even my DIGESTIVE ORGANS WERE DISEASED, acute attacks of cramps and neuralgic pains of the stomach being so severe as to threaten death.

Four years ago I was attacked with typhoid fever and two doctors attended me. They broke the fever and treated me for other troubles, but I became weaker and weaker and every one thought me past recovery. My sister would not give up hope, but persuaded me to try VITÆ-ORE. She and my wife said if I would swallow a few doses I would find myself improved; if I did not they would cease urging me. I began taking it, and the result which they predicted came about. I began to improve at once and became in the course of a few weeks a well man and have continued so ever since. I am able to do the hardest kind of manual labor. My heart never gives me any uneasiness, and my cramps, pains and fat are things of the past.

I could write as much more about the wonderful cure it effected, used as a gargle and swab in a case of VIRULENT DIPHTHERIA. The case was our only child and he is alive and well, while many others died who were treated by doctors. I cannot sufficiently praise VITÆ-ORE, and only wish I could reach all sufferers with a message of health and happiness. A. T. SIGSTAD.

CURED OF SYSTEMATIC CATARRH.

E. B. Coleman, of Beecher City, Ill., Tells the Public of His Cure.

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I was confined to the house and my bed during all of last winter and during the month of February gave up all hope, as did my friends and relatives. Through the generosity of Mr. Theo. Noel, I began the use of Vitæ-Ore on the 1st of March, 1901, and BEGAN TO IMPROVE IMMEDIATELY DURING THE FIRST WEEK. As soon as I got it I dismissed the doctors, as I thought I had to die anyhow, not having much faith or hope for a cure. In a week's time I was out of bed and around the house and steadily improved from day to day. The enclosed picture was taken the first of May, but two months after I began the use of V.-O.

I consider it a God-send to poor afflicted people if they only give it a fair trial and test its merits as I have done. Myself and young son cut and put up 350 shocks of corn during the fall, besides doing lots of hard work, and I am the same man that thought the spring of the year would find me in my grave. You can proclaim with me that it is the best remedy on earth for the afflicted, and I will be glad to tell all what Vitæ-Ore has done for me.

E. B. W. COLEMAN.

This offer will challenge the attention and consideration and afterward the gratitude, of every living person who desires better health or who suffers pains, ills and diseases which have defied the medical world and grown worse with age. We care not for your skepticism, but ask only your investigation and at our expense, regardless of what ills you have, by sending to us for a package on trial. In answer to this, address

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A Word to the Wise is Sufficient.

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you would have to stretch the barrel in order to hold it all; in fact, water being lighter than honey you would have very nearly two barrels, would you not? Could you not afford to sell it cheaper either by the barrel or by the pound? Did you ever try this? If so, did said honey absolutely refuse to take on any more water when this point was reached? Could this properly be called "watered stock" among bee-keepers? I have heard it said you could lead a horse to water, but you could not make it drink; but this seems as if you can make a barrel of honey drink without rolling it to water.

To-day it is raining. If this moist weather continues how many more barrels would it take to hold the out-put of extracted honey?

It is said there is no ill-wind but what blows some one good. The barrel manufacturers will be strictly "in it," won't they?

Knox Co., Ill., Oct. 10. J. E. Johnson.

[It looks as if the experiment of watering that honey had been made in a dry time, and the water poured into the honey so slowly that some 300 pounds of it must have evaporated in the process. For if 1-6 of the 1000 pounds was water, and that 1-6 were taken out, there would be left 5-6 of the 1000 pounds, or 833 pounds of waterless honey. If now that 833 pounds becomes half water, it must take to itself 833 pounds of water, and thus become 1666 pounds of dilute honey, instead of 1333. Under such circumstances the honey might refuse to become more than half water, but under favorable circumstances there would be no such limit.—Editor.]

Northeastern Wisconsin Convention.

The Northeastern Wisconsin Bee-Keepers' Association met in convention in Mishicot, Oct. 8, 1903.

Owing to very unfavorable weather conditions, the meeting was not largely attended. The afternoon session, however, proved more successful, and some important topics were quite extensively discussed; among which was, "The cause of miscellaneous laying of drone and worker eggs in the same comb," the subject being introduced by Mr. Cochems.

The date of the next meeting is Oct. 28, and as it is to be an important meeting, a large attendance is urged.

The election of officers will be held, and State Inspector France will address the meeting on the subject, "Advantages of Belonging to Bee-Keepers' Associations, and Attending Their Conventions."

Measures will also be taken to unite the local society with the State and National Associations. Dr. J. B. Rick, Sec.

Manitowoc Co., Wis., Oct. 13.

Honey Used in Cuba.

We find honey is used here for its remedial properties much more than it is in the United States, being sold in considerable quantities from all drug-stores, besides being employed in many home remedies for both man and beast. Glen E. Moe.

Cuba, W. I.

A Correction—Cost of Bee-Supplies.

Will you kindly correct the mistake in my letter in regard to the number of swarms cast on the same day. Instead of 115 it should have read 15; and from the fact I gave the number of colonies I was handling, it must have shown a mistake. (See page 526.)

I am much obliged to Mr. Hasty for bringing the same to my attention. Had I noticed the error I should have hastened to correct it, as I am not a descendent of the Baron Munchausen, who, most of our readers will remember, was the greatest prevaricator of his time. If I had not been so fond of reading Mr. Hasty's Afterthoughts, I should never have known how I had committed myself. As Mr. Hasty seems to think my mistake may have been due to that single-blessedness bread, if he will kindly assist us in removing the *cause*, we will try not to let the mistake occur again.

Will some brother tell us why, with the present price of honey, both comb and extracted, certain manufacturers see cause to advance the price of bee-supplies to the extent they have? I am a consumer of their goods, and find them of excellent quality, but when No. 2 sections at the factory get to be worth $4.50, and No. 1 $5.00, and there is always more or less waste of sections, it puts the consumer of bee-supplies to thinking.

W. S. BEVERLIN.

Delta Co., Colo., Oct. 12.

An Appreciative Reader.

The instructions in the American Bee Journal are of great value to me. I take great interest in bees. I have made them a study and my business. I commenced to study about bees, and the work of obtaining the best possible results from them, when quite young.

When but 10 years of age my parents had bees, and I would often have to help with them; ever since then I have had bees and always loved to work with them. but I never had any literature on the subject, so, when I came across the American Bee Journal, I was determined to have it, and would recommend it to each and every one interested in bees. After reading it a year, and also Prof. Cook's "Manual," I have learned to make bee-keeping a money-making business, to say nothing about the great pleasure obtained from the work.

I wish to express my thanks to each and every one connected with the American Bee Journal, for the information given to the lovers of bees; and also to "Our Bee-Keeping Sisters," for the good articles they furnish the Journal. They. with all our writers and lovers of hees, have my best wishes for success in the work.

A. G. ERICKSON.

Barry Co., Mo., Oct. 12.

Cutting Foundation with Electric Wire.

Did any of the brethren ever try to cut super foundation by electricity? I mean with a wire-imbedding outfit. Tie a No. 30 tinned wire between two prongs; pile up the foundation from 2 to 20, or even 30, sheets in a pile; now switch on the current and saw the heated wire through the foundation. Of course, it is best to use a box with saw-kerfs the right distance apart for the wire to follow through the wax. It is true this way has its drawback, but I think it as good as any.

HANS CHRISTENSEN.

Skagit Co., Wash.

DAIRYMEN ARE DELIGHTED to meet those who work for us. Cow keepers always have money. We start you in business. You make large profits. Easy work. We furnish capital. Send 10 cents for full line of samples and particulars.
DRAPER PUBLISHING CO., Chicago, Ills.
Please mention Bee Journal when writing

CONVENTION NOTICES.

Connecticut.—The Connecticut Bee-Keepers' Association will hold their fall meeting in the Capitol at Hartford, on Nov. 4. All bee-keepers are cordially invited to attend. For full information, write the Secretary.

MRS. EDWIN E. SMITH, Sec.

Watertown, Conn.

Jeffersonian Simplicity. — Thos. Jefferson, third president of these United States, was skeptical of the science of medicine, believing in permitting nature to re-establish order in the system when any function was deranged, and discussed the subject frequently, with the same interest and earnestness that he did theology and politics.

"I believe," he said, "that there are certain substances by which, applied to the living body, either internally or externally or both, nature can be assisted, and by such assistance accomplish in a short time what nature otherwise would do slowly."

The Vitæ Ore remedy, with which the readers of this publication are largely familiar. is offered by its discoverer and proprietors as an aid to nature, to assist in the natural healing and recuperating processes. It is itself a product of nature, a geological discovery, mined from the ground as are gold and silver, different from anything which has ever been offered of a remedial character. and as such should commend itself to even those most prejudiced against the use of advertised treatments. It contains in its composition free iron, sulphur and magnesium, elements ideally calculated, to, as Jefferson says, "assist nature" The fair and liberal offer to send one month's treatment on trial. made in these columns by the proprietors (Theo. Noel Co., Chicago,) is certainly most deserving of consideration. Please mention the American Bee Journal when writing.

FENCE! STRONGEST MADE. Bull Strong, Chicken-Tight. Sold to the Farmer at Wholesale Prices. Fully Warranted. Catalog Free.
COILED SPRING FENCE CO.
Box 89 Winchester, Indiana, U. S. A.
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25,000 lbs. of the very best Extracted Honey for sale in new cans at 6½ cents per lb. for the lot. Also 3,000 lbs. of A No. 1 white comb honey in 4x5 sections at 13 cts. per lb.
F. J. GUNZEL, Weiner, Poinsett Co., Ark.
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And everything necessary for the bee-keeper Prompt shipping. FINE ITALIAN QUEENS Catalog free.
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WANTED! Fancy Comb Honey
In No-drip shipping-cases. Also extracted, in barrels or cans. Mail samples and quote your best price delivered Cincinnati.
The Fred W. Muth Co., Front and Walnut, CINCINNATI, OHIO.

Order Your Bee-Supplies Now While we can serve you prompt, and get them at bottom prices.
42A11t R. H. SCHMIDT CO., Sheboygan, Wis.

GET A DANDY
THE DANDY BONE CUTTER will double your egg yield. Thousands of poultry raisers say so. It costs less, turns easier, cuts faster and lasts longer than any other. Price $5.00 up. Sold on 15 Days' Free Trial. Send for book and special proposition.
STRATTON MF'G. CO.,
Box 21. Erie, Pa.
Please mention Bee Journal when writing.

Langstroth on... The Honey-Bee
Revised by Dadant—1900 Edition.
This is one of the standard books on bee-culture, and ought to be in the library of every bee-keeper. It is bound substantially in cloth, and contains over 500 pages, being revised by those large, practical bee-keepers, so well-known to all the readers of the American Bee Journal—Chas. Dadant & Son. Each subject is clearly and thoroly explained, so that by following the instructions of this book one cannot fail to be wonderfully helped on the way to success with bees.
The book we mail for $1.20, or club it with the American Bee Journal for one year—both for $2.00; or, we will mail it as a premium for sending us THREE NEW subscribers to the Bee Journal for one year, with $3.00.
This is a splendid chance to get a grand bee-book for a very little money or work.
GEORGE W. YORK & CO.
144 & 146 Erie Street, CHICAGO, ILL.

BOYS WE WANT WORKERS Boys, Girls, old and young alike, make money working for us. We furnish capital to start you in business. Send us 10c stamps or silver for full instructions and a line of samples to work with. DRAPER PUBLISHING CO., Chicago, Ill.
Please mention Bee Journal when writing.

HONEY=JARS.
I can sell you a White Glass Honey-Jar, holding 15 ounces of honey, at $4 00 per gross. Also the standard square one-pound Jar at $4.50 per gross. Sample of either Jar by mail on receipt of 10 cents for postage.
J. H. M. COOK, Bee-Keepers' Supplies
62 Cortlandt St, NEW YORK CITY.
41Atf Please mention the Bee Journal.

WE INVITE all readers of the AMERICAN BEE JOURNAL who seek a college for themselves or friends to investigate
Mount Union College
Our motto in all departments is "Maximum efficiency at minimum cost."
Our scholastic training is equal to the best, our reputation first-class. All expenses for a year, aside from the clothing and traveling, less than $200.00. Co-education, health conditions, moral and religious influence, superior.
Send for catalog.
MOUNT UNION COLLEGE,
Alliance, Ohio.

Please mention Bee Journal when writing advertisers.

What Yon Yonson Thinks

Ay lak to tell Mister Buttler dat if any body shud happen to ask you, dat it don't vas vork to cross dom golden Italyans ma da lanternbugs caus der quveos he vos fraid in da dark, an dom bugs don't vos can be found in da daytime. But if he vil yust feed da lite collored bees ma 'lectric bitters, mebby dom git 'lectric lights. But don't be surprised if you vake up some morning and find yours bees hav all svarmed and took der hives all vid dom. Den vat? My goodeness, you don't vas hav half da trubble to furnish yours nabors vid supplies lak Yon Yonson had.

Von day ven ay vos so bissy to pick strawberries and svarm da bees, and put up boxes and foundation for da bees dat ay don't hardly hav time to rides, eat or sleep. It vas feller 7 miles avay vat called me up on da fone, an he say he yust cot a awful big svarm of bees, an he vont ay shal com and hive dom for him, and be sure an bring von of dom patent hives.

"Ver you got dom?" ay say. "O dom is in da top of a big hedge fence," he say. "Dom is da big Italyan bees, an dom is awful tame," he say.

"Vot collor is dom?" ay say. "O dom is great, big, black fellers," he say. "Vel," ay say, "ay don't got time to hive my own bees hardly, and ay don't got any extra hives to spare, an ay don't vos peddling bee hives now. So its better you send to Chicago for hives, lak Yon Yonson du, or put dom in a box."

An now he say dat his old friend Yon Yonson vent back on him. Vell, ay lak friends, but ay don't lak dom quvite so friendly.

Now, he vont ay shal transfer dom, but if he tank it is a picknick to transfer dom big, black Italyans, den I guess he vil be lone at da picknick; caus if ay help von, den ay half to help a dussen odder fellers.

Ay vont to say to Tom Carver and da odder fisherman, if dom vont to ketch lots of fish dom vont to git up early in da morning, yust ven da haycocks begin to crow. An to dat nice little girl vas is name Mis Able, vot is only 8 years old, and kin keep bees so good, an lak to read da Merican Bee Journal: dat Dr. Miller don't vos sold der hunny vot bring der mummy vat buy der big grindstone, to grind der ax vot sharpens der stick vot kin ketch Yon Yonson yet. Ay got little boy vot is six years old, an he is a bee-keeper to. He keep yust so fur avay from da bees som he can.

Vell, ay goan to tell you how ay lak da Merican Bee Journal. Furst, Dr. Miller's department is vort more as da hole paper cost. Dr. Miller is a plenty good miller, an he yust grind out all kinds of feed for da bee-keepers.

Mr. Hasty's afterthot is plenty all right, caus if it is some ting I forgit or overlook he is sure to smell it out and explain. If his forethot is as good som his afterthot den he must be purty smart feller; but don't tak any more hop, skip an yump.

It vould be som big vor in camp if Miss Vilson's Department should come up missing even for von veek. Ay tank it is good informating for da brudders as vell as da sisters; but since dat department begun, if Maw or da girls git da bee Journal first, den Yon Yonson he yust hav to vait till dom read vot da sisters hav to say. "From many fields" is good, an som times ay find bundles nuff to mak plenty big shock.

Beedom boiled down is all right, but ay gess Mr. New York git da fire little too hot some time, an da kittle go dry, caus some time it turn up missing. Better look out so da kittle don't bust.

On first page is da editorials. Dat is da cowketcher for da "old reliable;" it is good and strong, an can stand hard nocks; but now ay goan to give it som little bump.

On page 467, da editorlist he say dat dom fellers vat alvays order deir supplies late and iss behine, and don't have nuf supplies, its better dom git a veelborrow vat got handles on da bak side. Now, if da bee-keeper don't order nuff supplies early nuff, and da supply dealer don't order nuff early nuff, den ay lak to know who is da behindest. But ay gess it is da bee-keeper, caus he iss da feller vot git left. Ay tank mebby next year bote order so much dom git so fur ahead dom don't kin find da veelborrow nor hole shuting-match.

Vell, my ying, did you ever read vot Yon Yonson tank? You vil find it near da hind end of da Merican Bee Journal. Mr. New York some time put it in fur da engate. It is da bumping-board for da odder bee-papers vot is comming be hind da "old reliable." It iss da only soft spot da "old reliable" got, but da "old reliable" dont vas in any danger of any rear-end collission, caus it iss all vays on time.

Maw, she say if da fool killer should happen to com to our house it is better Yon Yonson run an hide rite strate.

Da Yon Yonson bumping-board is only temperary, an ven da readers git tired of it den it vill be laid in da shade for som new patent engate.

YON YONSON.

WANTED—Extracted Honey.
Mail sample and state lowest price delivered Cincinnati. Will buy FANCY WHITE COMB HONEY, any quantity, but must be put up in no-drip shipping-cases.
C. H. W. WEBER,
2146-48 Central Ave., CINCINNATI, OHIO.
24Atf Please mention the Bee Journal.

A New Bee-Keeper's Song—
"Buckwheat Cakes and Honey"
Words by EUGENE SECOR.
Music by GEORGE W. YORK.

This song was written specially for the Buffalo convention, and was sung there. It is written for organ or piano, as have been all the songs written for bee-keepers. Every home should have a copy of it, as well as a copy of

"THE HUM OF THE BEES in the APPLE-TREE BLOOM"
Written by
EUGENE SECOR and DR. C. C. MILLER.

PRICES—Either song will be mailed for 10 cents (stamps or silver), or both for only 15 cents. Or, for $1.00 *strictly in advance* payment of a year's subscription to the American Bee Journal, we will mail both of these songs free, *if asked for.*
GEORGE W. YORK & CO.
144 & 146 Erie St., CHICAGO, ILL.

☞ Good advertising is the pathfinder for all who seek success in business.—*Printers' Ink.*

"What Happened to Ted"
BY ISABELLE HORTON.

This is a true story of the poor and unfortunate in city life. Miss Horton, the author, is a deaconess whose experiences among the city poverty stricken are both interesting and sad. This particular short story—60 pages, 5x6¾ inches, bound in paper cover—gives somewhat of an insight into a little of the hard lot of the poor. Price, postpaid, only 10 cents (stamps or silver.) Address,
ISABELLE HORTON,
227 EAST OHIO STREET, CHICAGO, ILL.

Please mention Bee Journal when writing advertisers.

HONEY AND BEESWAX

MARKET QUOTATIONS

CHICAGO, Oct. 7.—The volume of sales are larger than at this time last year, and the supply more than corresponds with sales; but the prices and good quality of honey are expected to make a larger demand than we have had for several years. No. 1 to fancy sells at 13@14c, with practically no sale for off grades, which are quoted at 10@12c. Extracted, white, 6@7c; amber, 5@6c, according to quality and kind of package. Beeswax, 28@30c.
R. A. BURNETT & CO.

BUFFALO, N. Y., Oct. 11.—The demand for white comb honey is better than it was. The trade is particular and wants only very white, clean stock. If the wax is yellow from travel-stain it does not sell well, and price has to be cut. Fancy white comb, 14@15c; A No. 1, 13½@14c; No. 1, 13@13½c; No 2, 12@12½c; No. 3, 11@12c; No. 1 dark comb, 11@12c. No 2, 10@11c. White extracted, 6½@7c; amber, 6@6½c; dark, 5½@6c. Beeswax, 28@30c.
W. C. TOWNSEND.

BOSTON, Oct. 8.—Comb honey continues to be in good demand. Fancy white honey in cartons we quote at 18c; No. 1, at 16c; glass-front cases fancy white, at 16c; No. 2, at 14c. Extracted honey, Florida, 6½@7½c, according to quality.
BLAKE, SCOTT & LEE.

CINCINNATI, Oct 7.—The demand for honey is a little better. The prices rule about the same. Extracted is sold as follows: Amber, in barrels, from 5@5½c; in cans it brings about half cent more: water-white alfalfa sells from 6@6½c; white clover, from 6¾@7½c. The comb honey market is quite lively and same is sold: Fancy water-white from 14½@15½c. Beeswax, good demand at 30c. C. H. W. WEBER.

ALBANY, N. Y., Oct. 15.—Demand for honey good at 15@16c for white comb; 15c for No. 1; 14@15c for medium; buckwheat sought after at 13½@14c. Extracted more plenty at 7@7½c for white; 6½@7c for mixed amber; 6@6½c for buckwheat and dark. Beeswax, 29@30c.
H. R. WRIGHT.

KANSAS CITY, Oct. 6.—The demand for comb and extracted honey is good. We quote: Fancy white comb, 24 sections, per case, $3 00; No. 1, $2.90; No. 2, and amber, $2 75. Extracted, white, per pound, 7c; amber, 5½@6c. Beeswax, 25@30c.
C. C. CLEMONS & CO.

CINCINNATI, Oct. 1.—Comb and extracted honey are coming in freely, and the demand is good with steady prices. We are making sales at the following prices: Amber extracted at 5¾@6½c: white clover, 6½@7½c. Fancy comb honey, 15c. Beeswax, 30c.
THE FRED W. MUTH CO.

NEW YORK, Sept. 28.—Comb honey is arriving quite freely now, and is finding ready sale at 15 cents per pound for fancy white, 13@14c for No. 1 white, and 12c for No. 2 white and amber. Very little buckwheat on the market as yet, and prices are hardly established.

Extracted honey is ruling about the same as last with plenty of offerings of all grades.

Beeswax is somewhat declining and selling at present at from 28@29c per pound.
HILDRETH & SEGELKEN.

SAN FRANCISCO, Sept. 30.—White comb, 1-lb. frames, 13@14 cents; amber, 9@11c. Extracted, white, 6½@—; light amber, 5½@6c; amber, 5@5½c; dark amber, 4¼@4½c. Beeswax, good to choice, light, 27½@29c; dark, 25@26c.

There have been moderate receipts, mostly representing prior arrival purchases. The market continues to present a firm tone, but is not particularly active, buyers not caring to stock up very heavily at extreme current rates, and finding it exceedingly difficult to obtain noteworthy concessions in their favor.

WANTED! FANCY COMB HONEY
In no-drip shipping-cases. Also Amber Extracted in barrels or cans. Quote your best price delivered Cincinnati. The Fred W. Muth Co.
32Atf Front and Walnut, CINCINNATI, OHIO.

WANTED—Comb Honey in quantity lots. We are perhaps the only dealers in this article owning as much as 150,000 pounds at one time. Please state quantity, quality and price asked for your offerings. Thos. C. Stanley & Son,
24Atf MANZANOLA, COLO., or FAIRFIELD, ILL.
Please mention Bee Journal when writing.

The Best Bee-Goods in the World....

are no better than those we make, and the chances are that they are not so good. If you buy of us **you will not be disappointed. We are undersold by no one.** Send for new catalog and price-list and free copy of THE AMERICAN BEE-KEEPER; in its thirteenth year; 50 cents a year; especially for beginners.

—THE—

W. T. Falconer Mfg. Co.,
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W. M. GERRISH, Epping, N.H., carries a full line of our goods at catalog prices. Order of him and save the freight.

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If you want the Bee-Book

That covers the whole Apicultural Field more completely than any other published, send $1.20 to

Prof. A. J. Cook, Claremont, Cal.,

—FOR HIS—

"Bee-Keeper's Guide."

Liberal Discounts to the Trade.

Hives, Sections, Foundation,

etc. We can save you money. Send list of goods wanted and let us quote you prices. ROOT'S GOODS ONLY. Send for Catalog.
M. H. HUNT & SON, Bell Branch, Mich.

Please mention Bee Journal when writing.

BINGHAM'S PATENT Smokers

25 years the best.
Send for Circular.

25Atf T. F. BINGHAM, Farwell, Mich.

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SHEEP MONEY IS GOOD MONEY and easy to make if you work for us. We will start you in business and furnish the capital. Work light and easy. Send 10 cents for full line of samples and particulars.
DRAPER PUBLISHING CO., Chicago, Ills.

Long Tongues Valuable

South as well as North.

How Moore's strain of Italians roll in the honey down in Texas.

HUTTO, TEX., Nov. 19, 1902.

J. P. MOORE.—Dear Sir:—I wish to write you in regard to queens purchased of you. I could have written sooner, but I wanted to test them thoroughly and see if they had those remarkable qualities of a three-banded Italian bee. I must confess to you I am more surprised every day as I watch them. They simply "roll the honey in." It seems that they get honey where others are idle or trying to rob; and for gentleness of handling, I have never seen the like. Friend E. R. Root was right when he said your bees have the longest tongues; for they get honey where others fail. I will express my thanks for such queens. I am more than pleased. I will stock my out-apiaries next spring with your queens.

Yours truly, HENRY SCHMIDT.

The above is pretty strong evidence that red clover is not the only plant which requires long-tongue bees to secure the greatest quantity of nectar.

Daughters of my 23-100 breeder, the prize-winner, and other choice breeders: Untested, 75 cents each; six, $4 00; dozen, $7.50. Select untested, $1.00 each; six, $5.00; dozen, $9.00. Safe arrival and satisfaction guaranteed. Circular free. I am filling all orders by return mail, and shall probably be able to do so till the close of the season.

J. P. Moore, L. Box 1, Morgan, Ky.
31Atf Pendleton Co.

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We guarantee Satisfaction. What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS. PATENT WEED-PROCESS SHEETING.

Why does it sell so well? Because it has always given better satisfaction than any other. Because in 25 years there have not been any complaints, but thousands of compliments.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

Bee-Keepers' Supplies OF ALL KINDS *****

Very fine pure-bred BARRED PLYMOUTH ROCK Chickens and Eggs for sale at very low prices.

Langstroth on the Honey-Bee—Revised,
The classic in Bee-Culture—Price, $1.20, by mail.

BEESWAX WANTED at all times.

DADANT & SON,
Hamilton, Hancock Co., Ill

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6 Percent Discount

DURING THE MONTH OF OCTOBER.

There is every evidence that there will be a heavy demand for goods the coming season; and if you defer placing your order until next February or March, you will not only lose your discount, but may have to wait for the filling of your order some weeks. Indeed, you can afford to borrow money, and get your goods now, thus having them all ready for next season's use.

Every Month You Wait, it will Cost You 1 Percent Per Month.

The styles of goods will be about the same for next season, so there is no use waiting for a new Catalog. But remember prices have advanced, owing to the increased price of material; but if you

Take Advantage of Our Early-Order Discount

you will not be paying any more for your goods than last year. A word to the wise is sufficient.

The A. I. Root Co., Medina, Ohio.

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MECHANIC FALLS, MAINE.

Please mention Bee Journal when writing.

The Chicago-Northwestern Convention—Dec. 2 and 3, 1903

AMERICAN BEE JOURNAL

Published Weekly by GEORGE W. YORK & CO., 144 & 146 E. Erie Street.

43d Year. CHICAGO, ILL., OCT. 29, 1903. No. 44.

A Characteristic Southern California View—East San Bernardino Valley.

THE AMERICAN BEE JOURNAL

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DEPT. EDITORS,
DR. C. C. MILLER, E. E. HASTY, EMMA M. WILSON

IMPORTANT NOTICES.

The Subscription Price of this Journal is $1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

The Wrapper-Label Date of this paper indicates the end of the month to which your subscription is paid. For instance, "dec03" on your label shows that it is paid to the end of December, 1903.

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Objects of the Association:

1st.—To promote the interests of its members.
2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

ANNUAL MEMBERSHIP, $1.00.

Send dues to Treasurer.

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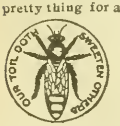
☞ If more convenient, Dues may be sent to the Secretary, at the office of the American Bee Journal.

A Celluloid Queen-Button is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-lapel. It often serves to introduce the subject of honey, and frequently leads to a sale.


OUR TOIL DOTH SWEETEN OTHERS

The picture shown herewith is a reproduction of a motto queen-button that we are furnishing to bee-keepers. It has a pin on the underside to fasten it. Price, by mail, 6 cents; two for 10c; or 6 for 25 cents. Send all orders to the office of the American Bee Journal.

Editorial Estimates of Dr. Miller's Book.

AN AUSTRALIAN ESTIMATE.

"Forty Years Among the Bees" is the title of a new bee-book written by Dr. C. C. Miller, in his usual chatty style. Dr. Miller has the knack of making all his writings readable, interesting, and instructive. He has had over 41 years' experience with bees, and sets out to tell the successes and failures he had during that time, special attention being given to failures. Such a book can not fail to instruct both professional and novice. The book is illustrated with over 100 half-tone illustrations taken by the Doctor himself, and mostly in his own apiary. I look upon the book as a valuable addition to apicultural literature.

The writer, on looking over the pages, is reminded of the very pleasant and instructive day spent at the Doctor's home, about 4½ years ago, when visiting the American States. Many of the illustrations include parts of the apiary and home surroundings which are familiar to him, and it is such pleasant recollections as these that create a desire again to visit the same spot. I would like Dr. Miller to visit our sunny land. He would be welcomed by all the bee-keepers, and especially by myself.—EDITOR W. S. PENDER, in the Australian Bee-Keeper.

The American Bee-Keeper contains the following very complimentary paragraph:

Dr. C. C. Miller, the world-renowned apiarist of Marengo, Ill., whose dominant traits are deep thinking and cheerfulness, has recently published another work on bee-keeping, entitled, "Forty Years Among the Bees." The new volume is a real gem of 328 pages, beautifully bound in cloth, and handsomely embellished in gold. It is profusely illustrated with half-tone engravings reproduced entirely from photographs taken by the author, and the Doctor's concise style and cheerful vein is maintained throughout. We have to thank Dr. Miller for the privilege of perusing this splendid book, and can heartily commend it to our readers as a most entertaining and instructive treatise.

The Rocky Mountain Bee Journal refers to the book in this kindly manner:

"FORTY YEARS AMONG THE BEES."

This is the title of the latest addition to the book-lore of bee-culture, and emanates from Marengo, Ill., bearing the insignia of our genial friend, Dr. C. C. Miller. Through the kindness of the good Doctor we are in possession of an autograph copy of the book.

The book is exactly what its name indicates—a narrative of experiences, the failures and successes of "forty years among the bees." It is a record of actual, daily work, and supplies what most of the text-books fall short of in detail—a description of the *modus operandi* of doing things about an apiary. The book is written in plain, simple language, and does not confuse the student with flights of rhetorical extravaganza. As an accompaniment to any of the standard text-books it will be found invaluable.

Every chapter is permeated with that incomparable philosophy of good cheer that has so distinguished Dr. Miller's life and work. Aside from the main issue we regard this as one of the chief charms of the book.

Dr. Miller's New Book

Free as a Premium for Sending Two New Subscribers.

The book contains 328 pages, is bound in handsome cloth, with gold letters and design; it is printed on best book-paper, and illustrated with over 100 beautiful original half-tone pictures, taken by Dr. Miller himself. It is unique in this regard.

The first few pages of the new book are devoted to an interesting biographical sketch of Dr. Miller, telling how he happened to get into bee-keeping. Seventeen years ago he wrote a small book, called "A Year Among the Bees," but that little work has been out of print for a number of years. While some of the matter used in the former book is found in the new one, it all reads like a good new story of successful bee-keeping by one of the masters, and shows in minutest detail just how Dr. Miller does things with bees.

HOW TO GET A COPY OF DR. MILLER'S "FORTY YEARS AMONG THE BEES."

The price of this new book is $1.00, post-paid; or, if taken with the WEEKLY **American Bee Journal** for one year, BOTH will be sent for $1.75.

Or, any present regular subscriber to the American Bee Journal whose subscription is paid in advance, can have a copy of Dr. Miller's new book *free as a premium* for sending us **Two New Subscribers** to the Bee Journal for one year with $2.00. This is a magnificent offer, and should be taken advantage of at once. For many of our readers it is not only an easy way to earn a copy of the book, but at the same time they will be helping to extend the subscription list of the old American Bee Journal, and thus aiding also in spreading the best kind of apicultural information among those who would be successful bee-keepers.

Address all orders to
GEORGE W. YORK & CO.,
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ESTABLISHT IN 1861
AMERICAN
BEE JOURNAL
THE OLDEST BEE-PAPER IN AMERICA

43d YEAR. CHICAGO, ILL., OCT. 29, 1903. No. 44.

Editorial Comments

Ignorance About Honey.

An Illinois bee-keeper, several hundred miles from Chicago, shipped a large barrel of honey to one of the big retail grocers in Chicago.

On receipt of the honey, the grocer wrote the shipper that he could not use it; that "it is mixed with comb, and not the same as sample."

The bee-keeper wrote us about it, and asked us to call and see what could be done. We did so. And this is what we found:

The bee-keeper had sent the grocer an advance small sample of the honey in *liquid* form. He then shipped the barrel of it in *granulated* form. That was all there was to it.

The grocer told us they had no facilities for reliquefying the honey. He also thought the granulated honey was "mixed with comb!" It really was the very finest grade of white clover extracted honey, granulated. And he is one of the leading retail grocers in Chicago! We think, however, that we convinced him that he was mistaken about the honey being "mixed with comb." But he refused to keep the honey. He didn't buy granulated honey. The sample was liquid, and that was what he wanted! Wasn't it aggravating?

Well, what can be learned by such a transaction? At least this: When selling honey at a distance to anybody but a bee-keeper, ship honey *exactly like sample* shown in advance. Had the sample been granulated Mr. Grocer said he would not have ordered the barrel shipped.

The Future of Sections.

When basswood becomes too scarce to use for one-piece sections, this will be under consideration. Editor Hutchinson thinks four-piece sections the solution of the problem. He likes four-piece sections, himself, better than one-piece sections, and thinks Editor Root would be surprised to learn how many bee-keepers there are in the country who really prefer them. To this Editor Root replies:

> I am well aware that there are a few who prefer four-piece sections, but the number is very small. Although we sell about 15,000,000 one-piece sections annually, we have not had during the past year, and a heavy one at that, orders for more than 100,000 four-piece, and that is mostly for our Eastern trade. We understand the G. B. Lewis Co. has had but a light trade in them, while the W. T. Falconer Co. has a much larger demand than either of us. The four-piece goods seem to have been used quite largely at one time in New York; but the improvements that have been made in recent years in one-piece sections, and in the manner of making them, have almost driven the four-piece goods out of the market.
>
> But for all that, we may have to go back to them, as we may not be able to get enough tough wood to make one-piece boxes to supply the present enormous demand. Between five and ten million feet of basswood is cut every year (this is only a drop in the bucket of the amount used by contractors and furniture-makers), and it would be hard to find any other timber as tough, in sufficient quantities, to take care of this enormous output.
>
> It may be, therefore, that we shall be compelled in the future, say ten years hence, to use four-piece boxes made of some other wood. Or possibly we may have to get up some scheme whereby chunk or bulk honey can be divested of every suggestion of adulteration, so that the general public in the cities will buy it the same as it would section honey.

However popular bulk honey may become, it will never take the place of section honey with some consumers. The question of four-piece or one-piece does not in the least interest the consumer, and so long as the section is demanded the small difference between the two kinds to the producer will probably make very little difference in the amount of section honey produced.

Quoting the Honey Market.

From time to time we have received criticisms on the honey and beeswax market column of the American Bee Journal. It seems the quotations on honey are not satisfactory to some of our best and most extensive honey-producers. At least one bee-keeper has suggested that this paper was "in collusion with the commission men" who quote for its market column. But nothing could be further from the truth than that.

If any one has a better way to secure more trustworthy honey market quotations than that now used, we would be very glad to know what it is. We should think that those dealers in the large cities, who are in close touch with the supply and demand, would know best what the ruling prices of honey are, and so ought to be the best able to quote prices.

But it should be remembered that it is hardly possible to quote on honey as on wheat or corn. Honey is not yet a staple article, and so prices are likely to fluctuate more, or to be less stable. There may be a good demand for honey one day, and then practically no demand for several days.

We think we have had sufficient experience in the honey marketing business to have learned a few things—some things that the producers in general can not possibly understand except by having a similar experience. At least it seems some producers do not grasp the situation from printed statements. It is much like learning the management of an apiary—much of it can be secured only in the apiary itself, in actually doing the manipulating.

But, if any one can suggest a more practical way to get honey market quotations, let's hear it.

Honey-Producers' Associations or Exchanges.

We think that such organizations, which are in the field for the purpose of buying and selling bee-keepers' supplies, honey, etc., should be considered on the same footing as other concerns which are out for business. We see no reason why a bee-paper should be expected to do a lot of free advertising for such associations, and then turn around and charge other concerns for the space they use, when both are simply dealers. We believe in treating all fairly and squarely, and expect to be accorded similar treatment in return. Bee-papers can not exist on air. It takes more than wind to pay for white paper, printers, office rent and office help.

So, if a honey-producers' association is out for business—out to make money for its members—and wants to trade with the readers of bee-papers, such organizations should be willing to use and pay for advertising space in the bee-papers, the same as do other legitimate dealers.

We are heartily in favor of the organization of co-operative honey-producers' associations. We have urged their formation. We have even tried to outline some methods by which we believed they could succeed. But it ought to be clearly understood that a bee-paper is not a philanthropic institution. Nor is it usually published just for fun. We think most of the bee-paper publishers would like to make a fair profit out of their papers, just the same as the bee-keepers would like to make a little money out of their bees and honey.

We believe this is a subject that none of the existing honey-producers' associations has considered very much. We commend it to them as a fair and legitimate proposition. There may as well be co-operation between the bee-papers and such organizations as anywhere else. Why not? The American Bee Journal does not take a back seat for any apiarian publication in its advocacy of co-operative honey-producers' associations, and in doing all it can to help them succeed. But it ought not to be expected to help them to get business and make money unless they are willing to pay their way the same as other firms who do business through advertising.

Honey Prices Demoralized.

A prominent bee-keeper, not over 100 miles from Chicago, wrote us as follows, Oct. 19:

> "I am going to try to get the bee-keepers in this locality to organize an association. Prices have been fearfully demoralized here this season, some bee-keepers rushing their comb honey off, even at 10 cents, when, if they had kept cool, and had done a little thinking, they could have had 14 to 15 cents for it. I have sold a good deal at $3 75 a case, and made a sale of 35 cases to a firm in Chicago at 14 cents f. o. b. here. If I'm successful in getting the bee-keepers together, I shall try to get them to join the Chicago-Northwestern Association. Also. big money has been lost to them by not having the American Bee Journal to read."

All of which shows that it pays bee-keepers to have membership in an association, and also to subscribe for, and read regularly, at least one of the leading bee-papers. The difference between 10 cents and 14 cents a pound on say 500 pounds of honey, would pay membership dues and subscription for a good many years. Why is it so many bee-keepers can't see this?

It is not only foolish to sell comb honey at 10 cents a pound, but it is also ruinous to any market to do so. We know an Illinois bee-keeper who sold his entire crop of comb honey at 14½ cents a pound, delivered on the cars at his station. And his crop was over 15,000 pounds, too.

It pays to keep informed on the honey markets, and also to develop your own market, if possible, and keep it supplied from year to year.

Miscellaneous Items

Rev. M. Mahin, of Henry Co., Ind., wrote us Oct. 22, that he was that day celebrating his 79th birthday anniversary, and the 60th of his ordination as a deacon in the Methodist Episcopal Church. On Oct. 31st he and his wife will celebrate the 60th anniversary of their marriage. And may they live yet many more years, and all of them filled with good health and abounding happiness.

* * *

Mr. A. I. Root's Convention Talk, on "Reminiscences of Bee-Keeping and Bee-Keepers in the Early Days," which appears in this issue, will be read with great interest and profit by all. Next week, J. S. Harbison, the pioneer bee-keeper of California, will continue on the same subject. These two talks, with a short one by Mr. Corey, occupied the principal part of the second evening session of the Los Angeles convention. They were listened to with rapt attention. We considered it the best session of the whole meeting. While it was mainly historical, it was something that likely could not have been had in any other way, especially the talks by Mr. Harbison and Mr. Corey.

* * *

Mr. Thos. Wm. Cowan, editor of the British Bee Journal, than whom there is no better known nor more highly respected bee-keeper in all the world, wrote us as follows, Oct. 6, 1903, from his home in England:

> Dear Mr. York:—On my return to London I found the American Bee Journal of Aug. 13, last, with my portrait, and the few kind remarks you make. I think it a very good reproduction of the likeness, and thank you; also for your remarks. It is certainly pleasant to find that we have so many friends in different parts of the world. Since we have been in Europe it has been a constant visiting, and we have not yet got through all those visits we have to make. Of course, some of the pleasantest have been with bee-keepers, both here and on the continent of Europe. It was quite touching to find so many who came long distances to see me again, and to find that an absence of nearly five years had only made the bond of friendship stronger......
>
> I hope you and Mrs. York are quite well. I am sorry that I was not able to attend the Conference at Los Angeles, and hope you had a pleasant time there. Yours faithfully.
>
> Thos. Wm. Cowan.

Of course, Mr. Cowan did not intend that his cordial letter should be given to the public, but we are sure our readers will be glad to see it, and Mr. Cowan will not chide us. He belongs to the universal beedom, but more especially to English and American bee-keepers. He has been "one of us" for the past five years, when living in California, where, from what we have heard and read, he and his good wife simply captured the hearts of the people who came to know them best.

It was very unfortunate for the Los Angeles convention that Mr. Cowan could not have deferred his return to England until after that event. He would have contributed so much to the value and interest of the meeting could he have been present.

* * *

Beeswax in the U. S. and Texas.—We have received the following correction, which we are glad to publish:

> College Station, Tex., Oct. 13, 1903.
>
> Editor American Bee Journal:—My attention has been called to the comment by Mr. Hasty, on page 650 of the American Bee Journal of Oct. 8, regarding the pounds of wax produced per colony in Texas and the United States. I would say that the figures were taken from the Twelfth United States Census. You will find them on page CCXXXIV, Vol. 5. It is evident that a decimal point has been omitted, and that the figures should read .43 per colony for the United States, and .41 pounds per colony for Texas, etc. It, of course, does not change the relative yield, which was the point I wished to bring out. I prepared the article somewhat hurriedly, and consequently did not notice this rather ludicrous error.
>
> Kindly make this explanation in your Journal, and oblige.
>
> Very truly yours, E. Dwight Sanderson,
> *State Entomologist.*

* * *

The Illinois State Convention, as announced on another page, is to be held at Springfield, Nov. 17 and 18. There ought to be a large attendance. Several important matters will come up for discussion and settlement. Now that the State Legislature has granted a fair appropriation to be expended in the interest of bee-keeping in Illinois, the Association should be so wise in its use that when called upon it can make a good report, and thus show the next session of the Legislature that the Association deserves at least a renewal of the appropriation, if not an increase.

Let many of the bee-keepers of Illinois be present at the coming convention. If nothing prevents, we expect to be there, and do what we can to help make it the best meeting of the Illinois State Bee-Keepers' Association ever held. Why not every bee-keeper in the State plan to be present, so far as possible? Let there be a general rally of the bee-folks at Springfield, Nov. 17 and 18.

* * *

Walter S. Pouder, one of our regular adverstisers, and an honorable bee-supply dealer in Indianapolis, wrote us Oct. 16:

> "This has been the best year for supplies that I have ever known. I would not be surprised if next year would be a still better one."

If Mr. Pouder's prophecy should prove true, it might not be a bad idea for dealers to lay in a good stock of supplies in good time for the rush. We know how it is to be unable to get goods from the manufacturers in such a time. Nothing could be more aggravating to a dealer.

Permit another suggestion: Dealers should keep their advertisements constantly before the bee-keepers. It is a mistake to drop them out for a part of the year. It gives the impression that those who discontinue their advertisements have gone out of the business. And, there are always some bee-keepers who buy their supplies during the winter. Such are more likely to patronize the dealer who keeps his advertisement appearing constantly.

* * *

A California Mountain Fire.—W. A. Pryal, of Alameda Co., Calif., sends us the following newspaper clipping, dated Oct. 17, at Ventura:

> A devastating mountain fire swept over the foothills of the Ojai Valley to-day. It is now raging along the mountain tops. The flames destroyed farm dwellings, irrigation systems, pumping plants, fruit-trees, bees, feed and timber.
>
> All the Nordhoff stores were closed to-day to all the men to go to the foothills and fight the roaring blaze. Every able firefighter was brought into service. The conflagration soon spread in many directions, and the forces were divided.
>
> The fire started near the Casa de Piedra school. It seems that

Miss Elizabeth Smith started a brush-fire near the school, and a strong wind scattered the sparks. Headmaster S. D. Thatcher called out the pupils to prevent damage. This was at 10 o'clock, and before noon Thatcher was compelled to telephone to Postmaster Smith at Nordhoff for assistance.

This morning the wind carried the flames to the northwest. Within three hours' time the houses of C. E. Sackett, Edward Senior, and W. J. Davies were destroyed. The latter also lost his pumping plant, water-tanks and outhouses. The barn of James C. Leslie was burned and his house caught fire, but neighbors saved it. He lost many colonies of bees. They would have been saved, but the angry bees drove the firemen away. One man was badly stung.

The fire is still raging, and it is an inspiring spectacle as the flames leap from the timber and brush. The entire damage can not be estimated, but it will run into thousands of dollars.

We suppose those of us who live in a prairie country have no adequate idea of the conflagration that takes place during a mountain fire. It must be something terrible when everything is as dry as it was last August when we were in California. With a strong wind a fire at such a time, and in some places, would be simply irresistible, and would consume all things in its way.

Convention Proceedings

THE LOS ANGELES CONVENTION.

Report of the Proceedings of the 34th Annual Meeting of the National Bee-Keepers' Association, Held at Los Angeles, Calif., Aug. 18, 19 and 20, 1903.

(Continued from page 680.)

SECOND DAY—Evening Session.

After the opening of the evening session a telegram from Wm. A. Selser, of Philadelphia, was read, as follows:

"I send greetings. Wish you a prosperous session."
Wm. A. Selser.

It was moved and carried that the secretary be instructed to write a recognition of this telegram to Mr. Selser.

Pres. Hutchinson—I have the extreme pleasure of bringing to your notice a name loved in every household throughout the land, Mr. A. I. Root, who will talk to us on

REMINISCENCES OF BEE-KEEPING AND BEE-KEEPERS IN THE EARLY DAYS.

It is a great pleasure to meet you all, friends, and it will be a great pleasure to me to tell you some of the things that happened in regard to bee-culture perhaps before many of you were born.

When I was a small boy I took a great notion to ants, bees, insects of all kinds. I wanted a hive of bees, but my good father objected. He said, in the first place, "They would sting the children." I was one of seven, half way between. He classed bees with dogs, guns, and some of those things that you trade for a brush-heap, and then set fire to the brush-heap and burn it up.

When I got married and was boss of a ranch, I said we were going to have some bees. And, by the way, I did not do much good anywhere in this world until I got married. The best investment, I think, I ever made—I don't know that it was my investment—the best investment Mrs. Root ever made, so far as I am concerned, was when she invested in my poor self.

Well, we got some bees, and I set them in a window in a hot day in summer, and the sun got so hot they flew away. Pretty soon I got a colony of an old farmer in a box-hive. Then I began ransacking agricultural papers, etc., to learn all I could about bees. I was a jeweler at that time, and my sister said that every old farmer that came into the store was pumped dry on the subject of bees. I kept that questioning up for about 40 years. I don't know that I have gotten entirely through yet.

Pretty soon I went down to the city of Cleveland and inquired for bee-books. There were only two then. I was very lucky in choosing L. L. Langstroth. I sat up that night and read the book. I do not suppose any urchin ever read "Robinson Crusoe" with more pleasure and interest than I read that book. I sat up until after midnight, perhaps, and read it over and over again. I found that L. L. Langstroth was still living, and I started a correspondence with him. I found he had only one queen imported from Italy. He did not want to spare her, but would let me have her for $20. Twenty dollars were not very plenty in those days, but I spent it for "the bug," as the neighbors said.

Of course, I had the colony removed to a frame hive, and went through that awful job of transferring. It made me sweat, you may be sure, but I got the combs into the hives, and I got my Italian queen introduced, but had to take her out four or five times a day to see that she was doing all right! I saw her lay her eggs; saw the larvæ grow in size. I think I saw the first bee that came out, and contrasted its color with that of the other ones.

You that have been through that know something about the wonderful interest and joy with which I watched the new bees. And the neighbors came around to see the little bees. I remember that our eldest boy, Ernest, whom some of you know, at the time these bees got out for a flight, was, perhaps, two years old. Of course, he was interested in everything that his papa was interested in. Mrs. Root missed him for awhile one day. My Italian colony was all around him. She said when she found him the yellow bees were all through his yellow hair so that she could hardly tell which was which! So it was but natural that Ernest should be interested in bees.

I counted up just how many days until the bees should be flying. Then the problem came up, how far they could fly. It was an easy matter then to tell just how far they flew, because there was no such thing anywhere around as yellow bees.

Everything went on prosperously until winter came on. Then the old farmer said, "Mr. Root, there are not bees enough, not a quarter enough, to winter over." I tell you that was sad news. I thought it was a pretty good lot. "No," he said, "they would not winter." I finally bought a larger colony of bees, with which, very triumphantly, I united my colony and made a larger one.

The next spring, from my nucleus, I began rearing queens. I first got a lot of little hives—frames three or four inches square. I had them in the garden under the currant bushes. At one time there was a little swarm of bees hanging on nearly every currant bush in the garden.

A. I. ROOT.

Pretty soon I learned that there had been a bee-journal published, and I hunted it up. This was the old American Bee Journal of 1861.

Then I commenced a correspondence with Samuel Wagner, which was kept up for several years. Mr. Wagner said the paper had not paid expenses. Then the war came on, and it was dropped. Through my influence, perhaps, as well as other influences, he re-commenced the publication of the American Bee Journal after the war.

There may be some in the room who remember the articles from "Novice" in regard to bee culture. I think a good many of them were blunders, but gradually "Novice" began to get ahead. After I had had my bees two or three years, I decided to abandon them. I think my first failure was in using an extractor a little too severely, and they had little honey to winter on.

I concluded I would try it once more. I just bent my energies to getting them in good shape. I wintered every one that season. That was a reward for pains and care. Then I made quite a record. I do not remember how much it was.

About that time I heard that over in Germany they had a honey-extractor. I made the remark that an extractor should be made of metal instead of wood. The German machine was a wooden affair. In a little while I had an extractor constructed all of metal, and then put it on the market. I think this was about war times. I got a ton or more of honey, sent it to Cleveland, and obtained 25 cents a pound. Not quite as much as our friend Harbison got for his car-load of California honey. Of course, that made quite a stir.

Mr. Samuel Wagner sent me a piece of comb foundation made of beeswax. That was the first intimation I had of manufactured foundation. I said it should be made on rollers so that we could make it a mile long, if necessary. In due time Mr. Wagner made some rollers.

My jewelry business was very good at that time, if I attended to it, but I was off a good deal of the time experimenting with comb foundation, extractors, etc. I remember Mrs. Root said at one time she wished I would give up the bees. She was very patient and very kind, but we had no place except around the cooking stove, and if I dropped the wax, and happened to set my big foot on it, I tracked it on all of her nice carpets. I stewed and fretted, and things didn't work. Those who make it now perhaps wonder at my failures, but laying the foundation is not altogether play.

One night I was so discouraged I was about to give it up. My wife begged of me and said, "If you will give it all up I will never say a word, and will never feel badly about it." I did not know but that was the best advice to take, but pretty soon I began to get ahead.

About that time I got hold of Quinby's book, "Mysteries of Bee-Keeping Explained." The first edition was written for the box-hive, and he presented his side of the box-hive so well that I almost thought I would rather be a box-hive bee-keeper.

Mr. Quinby described a tube with a plug at each end, for a smoker.

Then later our good friend Dr. Miller came on to visit me. He was a runner for a music store, or something of that kind. I tried to put him off, but you could not very well hold him off. He suggested to me that possibly rotten wood was a pretty good thing for smoker-fuel; but after I pretty nearly burned up a hive of bees, I did not know so well about it.

At the time of his visit I was interested in bee-hunting. I had hired an old veteran in the business to go along with me, and began excusing myself to the Doctor, and told him I was going bee-hunting. He said he would like to go along. I said, "You will get pretty tired." (He is short you know, and his legs are short.)

Out in the woods I was whistling something. I used to take singing lessons, and I happened to whistle one of my exercises. He said, "That is pretty, isn't it. I composed that." I thought to myself, "What a liar you are." The Doctor did not say anything, but talked it over pleasantly, because he was used to rough knocks. After we got home, he wanted to know if he might look at my curriculum—my music-book. He said, "You thought I was lying." I guess I was honest enough to say I had. He said, "There is the name—Dr. C. C. Miller. That's me." We had a very pleasant time. I have not time to tell you of all the good things about Dr. Miller, but it has been one of the pleasures of my life to count him as my friend. When we get tired talking bees, he can sing.

After that I paid him a visit, and what nice times we had talking of bees and bee-culture.

Before I get through I want to tell you a little story about Langstroth.

But about Samuel Wagner, the old originator of the American Bee Journal: Other journals were started up about this time, Phoenix-like. There was a clashing of journals of the same name, and Mr. Wagner bought out the others. Then H. A. King started the Bee-Keepers' Magazine. Then I invested with him in a patent hive. I sold a few hives, and then went back to the Langstroth frame.

Perhaps I would better explain that I sent to Mr. Langstroth for a frame that was exactly right. I think the frame he sent me was not alike at both ends, or something of that kind.

About this time I began to tell the people that our honey ought to be put up in one-pound packages, and that the bees ought to put it up for us. They laughed at me, and said I had better make the bees do it. I said I would.

When I started out to make that one-pound section I was going to make it 4¼x4¼x1⅞. My first idea was to hang them in a frame that could be hung in the hive—a Langstroth frame, with a very little deviation, could hold four sections one way. Since that time they have been made in different dimensions. Some of the bee-keepers have plead with me to try to have the manufacturers of bee-hives get together, and if they could not do any more, make the frames of one dimension. We are trying very hard to have a system of guages, to guage the sizes of our frames and hives, and everything else, so that no matter whether you buy of The A. I. Root Co. or anybody else, every frame will go just right into every hive.

Well, after I burned up a bee-hive by using Dr. Miller's plan (I don't know whether he has ever paid me for that or not), Father Quinby came out with a bee-smoker with a little pair of bellows. Pretty soon afterward our good friend Bingham, of Michigan—quite an expert in bees, who has hives of his own—came out with his smoker, and I had gotten up a smoker about that time. Bingham got his smoker patented. I think one of my eccentric ideas was, about that time, that patents were a nusiance. Bingham thought my smoker an infringement on his, and it seemed a tangled-up matter to know whether he was the original inventor. Finally, I said to him, Mr. Bingham, before going into any suit at law (I never had time in my life for lawsuits very much, and what experience I have had in going to law makes me feel as though we ought to do almost anything else rather than quarrel in that kind of way)—I told Mr. Bingham I would give up; he might have the smoker. He said, "What are you going to do?" I said, "We will buy smokers of you, or do anything else that is right."

Mrs. Root criticised me very severely just then. She said, "You are selling smokers for 50 cents. What are you going to do?" I said, "The kind Father above will help me out." I was trying to do what is right and fair.

About that time John G. Corey invented a smoker on the cold-blast principle, and he mailed it to me with a letter something like this:

"I have gotten up a smoker better than the old one by far, but, after thinking it over, I have concluded I would rather *give* it to the bee-keepers of the world than to fuss and bother with anything of that kind, and I don't know but what the best thing to do would be to send it to friend A. I. Root."

And so I feel grateful to my friend Corey; as long as I live I shall feel grateful to my friends for their assistance.

Somehow or other I have been "dead set" against tobacco. Not against men that use it, because some men who use it are better men than I am. One day in the apiary one of them lighted a cigar to blow smoke on the bees. I said, "If you will throw that cigar away and promise not to use it any more, I will give you a bee-smoker." Others said, "And will you give me one, too?" and I said, "Yes; but you must promise to pay me for the smoker if you break your promise to quit smoking." I said, "You can have as many smokers as you please, but it must go into Gleanings in Bee-Culture, so that your wives and children will know whether you are keeping your promise or not."

Not long after that I had given away something like 1000 smokers. Ministers of the Gospel took the tobacco pledge and took a smoker. My friends said to me, "Why, you will get swamped! These things cost you so much, and if you keep on giving them away you will get swamped!" I answered, "The good Father above will see me out." Then the daily papers said something like this: "There is a Quaker chap down in Ohio who offers every man, woman, and child a bee-smoker if they will give up tobacco and take a tobacco pledge." That was quoted in a great many papers, and advertised our smokers until we sold 20,000 in one year at 50 cents each—$10,000! Some said I was long-headed enough to see I was going to make a speculation out of it, but there was nothing of the sort. I am not long-headed at all.

Mr. Wagner died, and W. F. Clarke took hold of the American Bee Journal, and managed it quite ably for some time. I think while he had it in charge we decided to start a little quarterly.

Our good friend, Thomas G. Newman, who has recently been called to his last home, succeeded Mr. Clarke, and managed the American Bee Journal very ably. We did not realize his value until he was gone. The sorrow that covers a man's grave is oftentimes the poultice that draws out his virtues.

About this time I got acquainted with Prof. Cook. I found him connected with an agricultural college, and while visiting him once we studied the plants and insects along the grounds. He took me over to a man who got up the first chaff-hive. You don't need them here, but they were a grand thing there. It has been my pleasure to have an automobile ride through Michigan, and they told me there that the very best thing to winter bees in is a chaff-hive.

About this time somebody (Mr. Alley, I think) started up queen-bees by mail, and that was getting to be quite a business when some of the boys got careless, and some bees got out and stung the post-office clerks, and Uncle Sam passed a law that no more bees could be sent by mail; but just at the crisis, when we did not know what we ought to do, our good friend, Prof. Cook here, went down to Washington, and succeeded in getting an audience with President Hayes, and the decision was reversed, and we bee-keepers were happy again.

There are lots of things I shall probably overlook which will come to mind after the meeting is over.

Of course, I began to be curious about bees in other parts of the world. We had the best honey-bees on the face of the earth. And then D. A. Jones, of Canada, got the money together to send Frank Benton across to the Old World, where he sometimes had hard work to find a place to stay all night, and had hard work to live in comfort. But we have had a chance to test these different bees. There was a good deal of experimenting about it, and whether the bees are superior or not, we are indebted to D. A. Jones and Frank Benton for giving us the opportunity to try these different bees.

I was going to say something about Italian bees. If our good friend Langstroth were alive he could tell you something about them. Just here I may mention how many things come up now-a-days that are called new inventions. Ernest will come to me and say, "Here is something new." "Why," I say, "that was published perhaps before you were born!" For instance, queen-cells with rows as regular as the teeth of a rake. I think that was given in Gleanings in 1878. There was a bee-keeper on a farm who had rows of queen-cells equal along the whole length, made in those wooden cell-cups, just the same thing they are selling now. In "Langstroth on the Honey-Bee" there is something about a bee-keeper attempting to get straight combs in the brood-chamber. I think he mentioned that as a good deal of bother. But he says straight combs, with bees on both sides, are better than money in the bank.

Worker-eggs by mail. A bee-keeper, I think in the old American Bee Journal perhaps, was the first who succeeded in sending worker-eggs by mail and having them hatch queens.

Our good friend Harbison, here, has given us quite a few items in regard to his work in getting the first car-load of bees to the Pacific Coast, and I would like to ask him now to tell us something about the first shipment of bees to California.

Mr. Harbison—My first shipment was 116 colonies.

Mr. Root—Those were Italian bees?

Mr. Harbison—No, native bees, such as we reared in western Pennsylvania at that time.

Mr. Root—And Mr. Harbison has told us that people said to him if he succeeded in getting the bees here there was nothing here for them to work on.

Mr. Harbison—Fortunately, I had been in California—was here in 1854. My first experience was the importation of fruit-trees, of which I imported the first varieties in the Sacramento Valley. That was in 1855 and 1856, and at that time I studied the flora of the country, and conceived the idea of preparing a shipment of bees; sold out my other interests and returned. That was in 1857, in the spring. I prepared the bees and shipped them in the fall of that year.

Mr. Root—Perhaps there are quite a number of other names I should have included in my list here. A long while ago Mr. R. Wilkin paid me a visit, and we had some long talks.

Langstroth and Quinby were pioneers in bee-culture. Mr. Quinby's attention was called to the fact that Langstroth thought he was backward in giving his friend due credit. Langstroth, as perhaps many of you know, had periodic spells of mental depression. When I became acquainted with him he told me about those spells he had. He would go off by himself and would scarcely speak to his own family. Then he would come out of the attacks with a remarkably cool head, and gentle and genial manner.

He paid me a visit after one of those spells, and I had a good many talks with him about it. Sometimes he would get headstrong. One day he got pretty rough, and we pretty nearly had a quarrel. I felt quite sad about it. The next morning he came up to me and said, "Mr. Root, I want to beg your pardon for the way I treated you last night. That has something to do with my malady, and the next time I do that I wish you would come up, put your hand on my shoulder and say, 'There, there, old friend, I guess we had better change the subject.'" We had a good many talks after that, and among others about Quinby. He told me about his invention. "I did so and so, and Mr. Quinby did so and so, and Mr. Quinby was that or the other." It made a pretty long story, and after it was over I thought he was going home in a pretty bad frame of mind.

Mr. Langstroth, as many of you know, was not blessed financially during the latter part of his life, and it used to be customary for our bee-keepers' conventions to make him a donation. He thought the world had hardly given him what he ought to have had. I said to him, "Mr. Langstroth, you and Father Quinby have probably not a great while to live. I would advise you never to go over the matter again as you did with me here, and let it all pass. It is not worth while. Further, I wish you would go and visit Mr. Quinby and have a friendly talk, and let bygones be bygones."

He did not like that sort of logic. I urged the plan. Finally he went to bed. The next morning he did not get up, and I went into his room. He took his watch and handed it to me, saying, "Mr. Root, will you please listen to my watch." I said, "Isn't it all right? It seems to me to tick regularly," for you know I was a jeweler by trade. He said, "So it says, 'tick, tick, tick' to you, but to me it has been saying, 'Quinby, Quinby, Quinby,' all night long, and I am afraid that watch will keep on saying 'Quinby' until I start down there and shake hands with Father Quinby, and we two make friends!" And he started off. I tell you I felt happy.

In due time he came back and said, "Mr. Root, I have had one of the pleasantest and best visits I ever had in my life. We talked things over, and he didn't find any fault with me, and I did not find any fault with him, and we are going to be friends as long as God lets us live. When I had that talk with him I gave it up without any discouragement. And it seemed to me there was not much use talking."

It is a pretty big job sometimes to make friends in matters of that kind. That lesson comes to me often. There may be some people here to night whose watches, if they do not say "Quinby," may be saying something else, and will continue to say it until they get up and go and do the right thing, as Mr. Langstroth did.

But there are other friends here, and I would be glad to hear from Mr. Harbison. Mr. Corey also is here, and we want to hear from him.

(Continued next week.)

Why Not Help a Little—both your neighbor bee-keepers and the old American Bee Journal—by sending to us the names and addresses of such as you may know do not now get this journal? We will be glad to send them sample copies, so that they may become acquainted with the paper, and subscribe for it, thus putting themselves in the line of success with bees. Perhaps you can get them to subscribe, send in their dollars, and secure for your trouble some of the premiums we are constantly offering as rewards for such effort.

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Amerikanische Bienenzucht, by Hans Buschbauer, is a bee-keeper's handbook of 138 pages, which is just what our German friends will want. It is fully illustrated, and neatly bound in cloth. Price, postpaid, $1.00; or with the American Bee Journal one year—both for $1.75. Address all orders to this office.

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The Premiums offered this week are well worth working for. Look at them.

Contributed Articles

L. L. Langstroth and Bee-Stings.

BY DR. G. BOHRER.

HAVING seen some statements in the American Bee Journal concerning what I infer to be injurious results having followed bee-stings, in Mr. Langstroth's case, I will state that I was well acquainted with Mr. Langstroth, and happened to visit at his home in Oxford, Ohio, when he was suffering from one of his attacks of mental depression, to which he was subject from an early period of his life.

He was in his apiary when I passed through his yard-gate, and seeing him there I went directly to him. It was not his custom to go outside of his house when under the influence of these attacks, so he and his family informed me, but he had done so on this occasion, hence our meeting was accidental, so Mrs. Langstroth told me, stating he would not have consented to see me, nor any one else, except as it occurred in this particular instance (by accident), and she expressed the hope that it might be the means of cutting short this particular attack.

I inquired of him if he attributed these attacks to any particular cause. "Yes," he said, "when I was young I received a lick on the head," at the same time placing the fingers of his right hand upon the right side of his head, near the top. Bee-stings were not mentioned as having anything to do with his case.

When he died, the papers reported that he died of apoplexy, having been attacked while in the pulpit preaching, or about to preach, a discourse. Knowing what I do about his case, I doubted the statement, but was then, as I am still, of the opinion that he died of a stroke of paralysis of the brain. But in this I may possibly be mistaken, but be this as it may, I never heard that his death was caused by the accumulation of poison from bee-stings.

I will further state that in all my study and practice of medicine, during a period of 47 years, I have never learned of or heard of bee-poison accumulating in the human system. Nor have I, after receiving thousands of bee-stings, with quite a sprinkle of yellow jackets, bumble-bees, and bald-hornet stings thrown in, been any the worse off, so far as I can detect. On the contary, with time bee-stings seem to be, if anything, less painful.

When a boy I had one of my "windows" closed a time or two, once by a hornet, and another time by bumble-bees. Yellow jackets have peppered me pretty thickly upon my arms and other parts of my body, but not about the face. I am now past 70 years old, not as old as Mr. Langstroth was, but none the worse, as far as I know, as a result of stings.

Price Co., Kans.

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Foul Brood and Kindred Bee-Diseases.

BY C. P. DADANT.

I READ with interest the article of J. E. Johnson, on page 648. I think I can throw a little light on this subject.

I have been very much astonished to read, at different times, that boiling the honey did not destroy the germs of bacillus alvei, unless the boiling was kept up for several hours—three hours, I think. It had always seemed to me that boiling, if it was but for a minutes, would kill any germ of living organisms, whether animal or vegetable, and I yet wonder whether there might not have been some error in the experiments when it was reported that live germs were found after an hour of boiling.

The immunity of beeswax that has been once rendered seems to me well established. We have been manufacturing foundation for over 25 years, and during that entire time our bees have had access to the wax-receiving room. It is difficult to handle large packages of beewax, barrels, hogsheads, sacks, etc., in a closed room, and our wax-weighing room would have been a trap for the bees, had we not arranged to let them go out of it of their own accord. Yet, with an apiary of 60 to 80 colonies close at hand, we have never yet seen a case of foul brood So we are convinced that beeswax is absolutely safe after it has been once rendered at the ordinary temperature. Yet, if the scientists are right in their experiments, the beeswax would have to be boiled three hours, at least, to destroy the germs.

I have thought of an explanation which would reconcile the necessity of long boiling with the fact that beeswax is immune, and that is: Is it not possible that the hot wax soaks the germs and embalms them—*mummifies* them—in such a way that further development is impossible? Our own experience, and that of Mr. France, are conclusive as far as wax and foundation are concerned as to their harmlessness.

It is true that foundation, when manufactured, has passed through several heating processes, both for refining the wax and for sheeting it. In many cases the wax remains hot for hours, but in some cases it is certainly not hot for three hours together. But dip anything you please into hot beeswax, and it at once becomes soaked with it, and when the wax cools, it becomes stiff. All bee-keepers who have had anything to do with rendering beeswax know how it soaks into everything, how it coats all sorts of utensils, or the insects, or particles of vegetable matter, wool, cotton, etc., that may happen to come in contact with it. It seems to me very plausible that the bacilli which come in contact with it would be so thoroughly soaked with wax as to become perfectly harmless, even if we have to grant that an hour's boiling would not kill them; though, with all due respect for the experiments made, it looks to me almost impossible that any life on our planet could be capable of resisting only a thorough soaking in boiling water, even.

If the surmise is right, it will explain how beeswax, even when only once rendered, would prove safe from the germs of brood diseases. It would not then require more than a very thorough heating and melting of it to soak all germs so as to make them harmless.

OIL OF EUCALYPTUS FOR DISEASED BROOD.

During the past year I have been asked a number of times about cases of diseased brood, and a number of samples have been sent to me. In each case but one I have concluded that the samples sent me were not foul brood. In the one case alone, a piece of brood-comb sent from Oregon, I recognized the well-described symptoms—the coffee color and glue-pot smell of the disease. I have treated two cases of dead-brood with entire success, by the use of oil of eucalyptus, which has been recommended by several writers in the Revue Internationale D'Apiculture; but I am satisfied that neither of these cases was foul brood. The manner in which the remedy was applied was as follows:

A small cardboard box, such as jewelers use for small articles of jewelry, was filled with cotton-batting, a small, round hole, a half inch or so, made into the end of the box, and as much oil of eucalyptus as the cotton would soak was poured in. This was placed just over the combs that were infected.

In the first case, the colony produced quite a crop of honey while undergoing treatment, and not only was the smell of eucalyptus strong enough to notice it when the wind was right, some 20 feet away, but the honey which was extracted from this colony had a distinct smell of the oil of eucalyptus, though not strong enough to make it objectionable.

The oil was applied for five weeks regularly, every four days, so that the colony was constantly kept under the influence of the drug. The bees did not seem to suffer from it in any way. According to our Swiss friends, the greatest objection to this drug is that it attracts robber-bees. I did not notice any trouble on this score. But it was used during a honey crop, this time.

The other case was in the apiary of a friend in Missouri. Two colonies were attacked, and he found a third just as he began applying the remedy. In less than four weeks all traces of dead brood had disappeared. This case was apparently what has been termed "black brood," for the sealed larva, or chrysalis, turned black in the cell.

I do not believe that it would be advisable to rely too much on this remedy in a case of true foul brood. All authors seem to agree in advising bee-keepers to avoid drugs. Yet it is to drugs that we all turn if we want to avoid the more radical means of fire. There is no doubt in my mind that eucalyptus will render great service in cases where the disease is not clearly foul brood, and I believe I would try it in very mild cases, and, by all means, would employ it when colonies are in danger of the disease, as a preventive. The fact that oil of eucalyptus is a strong antiseptic would indicate its usefulness in this respect. Its strong smell tainting the honey would lead one to think that it might even destroy germs existing in the honey.

At any rate, I would strongly recommend oil of eucalyptus for any diseased brood, where well-known symptoms of foul brood are not positive. I am of the opinion that if we could eliminate all the minor brood diseases, we would find the cases of actual foul brood less numerous than generally believed. Hamilton Co., Ill.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Illinois Strawberries in October.

Who wouldn't live in Illinois when you can have luscious, ripe strawberries for dinner, picked from your own vines the 12th of October. Good, big ones, too. Didn't I enjoy picking them, though, to say nothing of eating them?

[Just think of big strawberries, then a big lot of honey, then more strawberries again. That's the way Miss Wilson has had the good, sweet things of this life this year. And then tells the rest of us poor mortals about it in such a tantalizing paragraph as the one above! So it goes.—Ed.]

A Well-Wishing Sister.

Though "up to my ears" in work, superintending about a dozen irons that I have in the fire, I am going to take time to wish you good-speed in this new department of the American Bee Journal.

In the winter is usually my leisure time, and all through the spring and summer my journals pile up unopened. Then, when everything is snug and tight "for a long winter's sleep," I get down my bundle, a smile of contentment spreads over my face as I smooth out the sheets, sort them out, and settle down for a good time. I've read your articles with much interest, and also some others, and many times the spirit has moved me to argue out some points, air my views, and relate some experiences; especially when the "old bachelor bee keeper" question waxed warm. After your kind invitation I shall certainly try to contribute some lines this winter worthy your columns. Till then, believe me with sincere sympathy,

Your friend and well wisher,
Clinton Co., N. Y. Frances E. Wheeler,
(*Lecturer of the Chazy Grange.*)

I am very sorry that you did not immediately act upon the good spirit that moved you, and let us have the benefit of your views at once. But we will hope to hear from you soon.

I am sorry to say I did not receive the "journal" containing your photo, though I looked for it.

"Bay View Reading Club."

Will you please tell me, through the American Bee Journal, where information can be obtained about the Bay View Reading Course for literary clubs? It is frequently mentioned in the papers, and seems to be in much favor. If you could give some description of it I feel sure it would be, just at this time, a real favor to many others who may be looking for plans for a literary club.

Kane Co., Ill. Etta MacFarlane.

Without having any personal knowledge of the matter, I am glad to give you the following information that has been sent me:

THE BAY VIEW READING CLUB.

One of the popular educational institutions of to-day is the Bay View Reading Club. It has a thousand local clubs, and over 12,000 members. It is organized in nearly every State, and in other lands. In the past two years and a half over 500 woman's and other literary clubs have adopted its courses of study. The originator of the organization is John M. Hall, who is still at the head of it, aided by several assistants who are trained for the work. The Bay View courses endeavor to offer an intelligent plan for home study, and save the members from the confusion resulting from the abundance of literature of the day. The courses are brief, simple in plan, and comparatively inexpensive. The courses are delightful reading journeys, wherein the country's history, literature, art and music are deftly combined in a study.

This fall the club begins the study of Germany, and will make side-trips into the delightfully interesting kingdoms of Belgium and Denmark. Circulars giving general information, and copies of the magazine, can always be obtained by addressing Mr. Hall, 165 Boston Boulevard, Detroit, Mich.

Banana Sandwiches.

Select two large, very ripe bananas, peel and slice very thin and evenly. Sprinkle with two tablespoonfuls of lemon-juice. Add a little honey to white cream cheese and spread on dainty rounds of bread instead of butter; place a layer of the sliced bananas between the two slices. Nutmeats chopped fine, and maraschino, or any fine conserved cherries cut in halves, may be used for filling. Also preserved ginger and orange peel minced fine and mixed with a little thick, sweet cream.—Herald and Presbyter.

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

SERENE BEE-MAN AND OUT APIARY.

It's a smilable picture Mr. Hooker calls up of the serene bee-man visiting his out-apiary. Nothing bad is going on just then, and if he's a person inclined to "fools' paradise," there is little in sight to keep him from constructing one right there. "So nice that my bees out here don't make me any trouble like other cases I read of." But then, if he actually harvests a good crop of honey, notwithstanding the miscellaneous fracases he didn't see, the situation may be somewhere near the saying: Ignorance is bliss—folly to be wise. Page 582.

SHAKING OFF QUEENS.

I hope Dr. Miller is right about the harmlessness of shaking off queens, as per page 585. Perhaps I can go a little farther, and say I think he is; but an uneasy feeling about that persists in keeping a lodging in my mind. Sometimes the shake must send her down with quite a bit of violence. What are the consequences of throwing a big basket of eggs—and is not the queen about that?

FUEL FOR BEE-SMOKER.

Just been trying the hickory-bark smoker-fuel, as per R. L. Taylor, page 590. Very fair—to use as a sort of adulterant. Don't put it in until the smoker is real hot, and not in preponderating quantities at any one time. I use another adulterant which may be worth recommending—newspaper wadded up in suitable sized wads. This is mainly for use when first starting up. After you get well along ashes and coals take up much of the fire space, and then it comes right to put in about what fuel there is room to put in. It's different when you begin. It doesn't seem nice to begin with fire-box only half full of fuel, tumbling about with every move. And to fill the yawning space entirely full of your choice fuel is a simple waste of half of it. I begin (Clark smoker) by crowding one side the chamber with newspaper wads. Then I fill the other side partly full of hard rotten wood, and finish off with soft rotten wood. The paper, besides being an innocent occupier of space, contributes considerable smoke. Also, it holds possession of the space longer than one would suppose. The smokers, with cylindrical fire-space, would call for a little different manipulation, but I guess it could be managed all right.

CO-OPERATION AND INDIVIDUAL SELFISHNESS.

Interesting to see how Prof. Cook goes the whole—figure—in the matter of joint property. 'Spects that in that matter it will do to go the whole angel, but won't do to go the whole hog. Then, if human hogs should be found much plentier than human angels, it might wreck the scheme.

Three men could take the same daily paper, if their convenient hours for reading came differently, and exact hours were pretty rigidly enforced. Twelve families, each with a magazine for one week to read and pass on, looks a quite seductive economy on paper; but where the magazine would actually be when it ought to be at No. 12, I am not so sure. Worth trying. A grand, all-around, nation-wide fight against individual selfishness is needed. Not to be despaired of, either, if the proper amount of revival enthusiasm should get into it just right. And those manifestations of selfishness, which are so old and matter-of-course as to be considered as if they were natural laws, are just the ones to attack first. Anti-hog rivival first, and then conbination, eh? Page 597.

A SEDUCTIVE TEXAS WAY.

J. E. Chambers' Texas way seems to be, first, get an enormous colony of bees; second, brush it to prevent its swarming naturally; third, get a big lot of honey from it. Seductive. He that is able to follow, let him follow. Page 598.

GETTING DOWN LOFTY SWARMS.

It's a little hard to get rid of a semi-humorous feeling toward the scheme of "shooting" lofty swarms down by the smell of carbolic acid. We mustn't let our merriment deprive us of what may turn out to be a valuable addition to our resources. First trial resulted in the swarm taking wing and clustering on a lower place.

The other experience Mr. Bartz gives us is also interesting. Evidently a carbolized cloth can be made to serve somewhat the turn of an assistant, driving the bees in one direction while you with a smoker drive from another. A few queens and some drones without any workers, and all very badly frightened, *might* die in the course of a night without it's being exactly a case of poisoning. Howsomever, at present we had better consider it a poisoning case—and look a little out. Page 600.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Moving to Sweet Clover—Drone-Laying Queen.

1. By moving about 20 miles (on dirt road) I can get where there is black, waxy land, and a world of sweet clover. Would it be best to go there?

2. Will an old queen ever get so she will lay only drone-eggs?

ALABAMA.

ANSWERS.—1. It might pay well to move 20 miles for the sake of a better pasture; how well would depend upon how much better the pasturage. A good way would be to try part of your colonies in each place and compare results.

2. In many cases the contents of the spermatheca become exhausted, which will be shown by part of the brood hatching out of worker-cells as drones, finally there being only drones.

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Feeding Bees with the Miller Feeder.

I have tried making the original Miller feeder as near as I could from reading your book, but somehow I am not making a success in using it. If I leave room for the feed to run under the side it runs too fast down through the hive and out on to the ground; or sometimes it don't run at all. And if I leave room for the bees to come up over the side, they go down into the feed and get stuck in the feed and drown. I wish you would give us a good description of the feeder, and how to use it, in the American Bee Journal. I have your "Forty Years Among the Bees," but I am too dull to understand just what is the matter. Some of my bees—one colony—will not take feed when even put in a dish over the brood-nest. What is the matter with them?

NEBRASKA.

ANSWER.—There must have been something radically wrong in the construction of your feeder to allow the feed to run down through the hive, unless the feeder was filled so full that it ran over. As I use it, the feeder is hung in a common T super, just because I have plenty of T supers on hand, but it may be put in a box of any convenient size, the box being without top or bottom, and the inside of the box being about an inch wider and longer than the outside width and length of the feeder proper.

For the ends of the feeder, and the two inside partitions, ½-inch stuff is used, and ¼-inch stuff for the other parts. This thin stuff is less likely to split with age, I think, than heavier stuff. At any rate, mine are a good many years old and all right yet, most of them. By using small nails about half an inch apart, this thin stuff can be nailed together to make a very close joint. Suppose you use a T super for the outside box, or have a box of the same dimensions, 17⅜x12⅛ inside measure, and 4½ inches deep, the material needed will be as follows:

One bottom, 16x11x¼.
Two ends, 10½x4¼x½.
Two sides, 16x3⅞x¼.
Two partitions, 15x4⅛x½.
Two top pieces at ends, 13⅞x2x¼.
Two top pieces at sides, 15x2½x¼.

The two partitions are inside, leaving a apace of about ⅜ inch between the partition and the side, the upper part of the partition coming flush with the upper part of the ends. That will leave a space of ⅛ inch under the partition for the feed to flow under—a space too small for a bee to pass through. The top pieces at the sides are nailed on the partitions, and the other top pieces on the ends, the end pieces on top supporting the feeder in the outside box or super. When the feeder is hung in the super, it is well to nail it on by a single very small nail at the middle of each side and each end. This will prevent the top pieces from curling up.

You will see that there is no place the bees can get to the feed except in the ⅜ space at the side, and bees never drown in so narrow a space.

I don't know just why that colony will not take the feed; they are quite capricious sometimes.

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Wants Lots of Increase—Foul Brood.

My bees have not done very well this season; I wish to increase as much as posssble, and I am not particular about getting any honey next year, but I do want a lot of bees.

I have 2 colonies from which I have taken 200 pounds of extracted honey, and I do not care if I have to feed a lot of sugar next year. To how many colonies of bees can I multiply my 2 colonies?

My bees had foul brood early last spring, and by following the directions given in the books, I am glad to say I got rid of it very easily.

ILLINOIS.

ANSWER.—Your question is a hard one to answer. You will find it easier to increase if you have a long flow of natural stores than to depend on feeding; still, it will help the incease if you feed whenever the bees are not gathering anything, when it is warm enough for them to fly freely. Starting with two, you may close the season with anywhere from 10 to 20, depending upon the season and your skill and experience. Just between you and me, let me whisper a word in your ear: Don't try to increase too fast, especially late in the season. Better have 10 strong colonies at the close of the season than twice as many weaklings.

◆

Requeening Colonies—Color of Carniolans.

I have 10 colonies of bees which have not been requeened from any other stock of bees in the last 10 or 12 years, and would like to secure a few good queens, but would like to know:

1. How late in the season could I successfully introduce queens into my stock?

2. My colonies all have queens now, and would I better destroy the queens in the colonies into which I wish to introduce new queens before I order, or wait until I secure the new queens?

3. What is the color of Carniolan bees?

KANSAS.

ANSWERS.—1. Just as late as bees are flying, and perhaps later.

2. Wait till you get the queens.

3. Much the same as the blacks, with narrow, whitish bands.

◆

Peculiar Odor Around Hives—4x5 Sections—Comb or Extracted Honey?—Italianizing.

Last spring I purchased 5 hives and implements, known as a beginner's outfit, and started in the bee-business. I bought 2 colonies of black bees in common hives, and transferred them successfully to new hives, and have at present 4 colonies. I did not get much surplus honey in sections; the transferring and subsequent new comb-building seems to have given them a decided set-back, but I hope for a good crop next year. Now, I want to ask a few questions:

1. For about a week I have noticed a peculiar moldy or musty odor in the vicinity of my hives; it is noticeable 8 or 10 feet from the hives. A Mr. Neilsen, 3 miles west of me, noticed the same thing, also another bee-keeper a few miles west of town. I cannot find anything wrong in the hives; the bees seem to do well, and have stores and brood in all stages from eggs to sealed brood. The bees are working now on goldenrod and aster. Is it possible these flowers are the cause of this peculiar odor?

2. What is the opinion of leading apiarists on the 4x5 section? Some claim it to be the coming section. What do you think of the Danzenbaker hive?

3. Would a 10-frame hive be better than an 8-frame for the South? I want to make bee-culture a leading part of my work, and want to be up-to-date and have the best, and therefore want to be posted on he advantages or disadvantages of different styles of hives with Hoffman self-spacing frames; supers hold 24 4¼x4¼ bee-way sections with separators.

4. From a commercial point which pays the better, comb honey or extracted? and can I use the same style of hive for both kinds?

5. There are no Italian bees nearer to my place than 3 miles, while nearly every farmer around me has from 1 to 20 colonies of black bees, not to mention the wild bees, and, literally speaking, "the woods are full of them." Now, if I were to buy Italian queens I don't see how I could keep their offspring pure. It is almost a certainty that their young queens would mate with black drones, and if I would have to keep on buying Italian queens, and destroying all queens reared in my hives, it would be rather expensive so long as there does not seem to be a way to control the mating of queens with such drones as we would desire. I don't see how I can Italianize with profit. What is your advice in the matter? ALABAMA.

ANSWERS.—1. The probability is that the odor comes from some plant upon which the bees are working. I have had the same thing occur here; an exceedingly offensive smell coming from the hives, with nothing apparently wrong otherwise, the disagreeable smell disappearing in a few days.

2. Hard to tell; those who try them and don't like them are not likely to say much about them, so that the testimony is rather one-sided. Some claim they can get a higher price for honey in tall sections, others say there is no difference. Much the same with the Danzenbaker hive; some are quite enthusiastic over it, while others do not approve. For my own use I prefer the dovetailed.

3. If you have any considerable number of 8-frame hives, and are working for comb honey, don't think of changing to the 10-frame without first trying them on a small scale. The difference in weight in handling the hives counts for a good deal with some; if you don't care for that I'm afraid the 10-frame would be better for you. But no one can decide the question for you so satisfactorily as you can decide it for yourself by trying the two kinds side by side.

4. That depends upon the quality of the honey, the market, and the man. I should lean toward the opinion that extracted might be better for you, but I may be entirely wrong. The same hive may be used for either, but if you work for extracted the probability is that you should have a larger hive than the 8-frame.

5. Most decidedly you can Italianize with profit, and most decidedly you'll find it an impossibility to keep pure Italians. The first cross between Italians and blacks, you will probably find, will give you as much honey as pure Italians. It will be a small expense to buy one Italian queen each year, and you can plan to have most of your young queens reared from her. In that way you can keep up your stock quite satisfactorily.

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Your Name and Address on one side--Three Bees on the other side.

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The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the subscriber, and on the other side pictures of a Queen, Drone, and Worker, as shown here.

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The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

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FROM MANY FIELDS

A Peculiar Year for Bees.

We have had a peculiar year. I started with 40 colonies, and some were very weak, as the spring was very unfavorable, and they were on the point of starving when the clover flow came, about June 15; but from then until Aug. 25 they improved all the shining hours, and I closed the season with 2700 sections of comb honey, and 500 pounds of extracted. I extracted all the half-filled sections, and will save them for next year for bait. I am getting 12½ cents for my comb honey and 10 cents for the extracted, here at home. WM. CLEARY.

Kossuth Co., Iowa, Oct. 18.

How to Use Formaldehyde.

After reading many letters and items on the use of formaldehyde as a destroyer of foul brood, in the American Bee Journal and other journals, I fail to find sufficient insistence on the necessity of having the box into which the infected comb is placed absolutely air-tight. Formaldehyde-gas is very diffusible, and unless it is confined by sealing up every crack or little hole the effect will be very disappointing. Perhaps that will explain some of the failures reported.

C. H. GRAENING, M. D.

Bremer Co., Iowa, Oct. 15.

A Wet, Cold Season.

It has been a very wet, cold season, still the bees did well the first part of the season. They commenced swarming the last of May, and the swarming fever ran high in the majority of apiaries until the first of August.

It is seldom that I have known bees to gather honey faster than they did the past season, from the middle of May until the first of August, when they stopped gathering any surplus honey in this vicinity.

I started in the spring wtih 15 colonies, nearly all Italians, but a few hybrids. They cast 27 swarms, but 10 of them clustered in 5 clusters, so at the close of the season I had 37 colonies and 700 pounds of comb honey, and if there had been a fall flow of honey I would have had several hun-

dred pounds more. I have a home market for all my honey, at 15 cents per pound, and besides this I was awarded $7.00 premium on 100 pounds of honey at our County Fair. S. B. SMITH.
Millelacs Co., Minn., Oct. 19.

A Poor Season.

This has been a poor season here, so much rain and cool weather. My 10 colonies of bees averaged only about 15 pounds per colony. W. W. BOTSFORD.
Dickinson Co., Iowa, Oct. 18.

Formalin Gas as a Germ-Killer.

The bee-papers have not got that right yet about formalin. Formalin is a gas from formaldehyde, and 40 percent water, and not necessarily a trade name. The gas does not kill germs, but when the gas comes in contact with the air it oxidizes into formic acid. It is the acid that kills germs.

When we kill bees with sulphur we also kill germs (almost as good as sulphur), but the bees are killed by suffocation, and the germs are killed by the acid that the fumes and air produce. The germs are plants; the bees are animal life. Some things will kill one and not even injure the other. I am in hopes that some time we may get a cure that is sure death to germs, and will not cause the bees to miss a meal.

Prof. Lambotte is said to have made a big mistake, but I think he is not entirely wrong. Bacillus alvei is not the same as bacillus mesentericus, but probably the former cannot become pathogenic without the aid of the latter. J. E. JOHNSON.
Knox Co., Ill., Oct. 21.

Difference in Storing—Queen Above Excluder.

On page 552, "California" wants to know why one colony will store and another starve. It may be the kind of flowers they are working on, as well as the kind of bees. Full blood, or nearly full blood, Italians and Carniolans will store a lot of cotton and bitterweed honey. The blacks will store very little cotton and hardly any bitterweed honey.

On page 553, "British Columbia" asks about the queen above an excluder. It is not an uncommon thing for queens to do that here; they get through somehow; I had 4 or 5 cases of that kind this year. J. S. PATTON.
Hale Co., Ala.

Sections, Shipping-Cases, Honey-Cans,

And everything necessary for the bee-keeper
Prompt shipping. FINE ITALIAN QUEENS
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TWO YEARS FOR $1.00

After a man succeeds in publishing a good journal, the next step is that of getting it into the hands of the people, of getting them to reading it, and becoming acquainted with its merits. This can be done by advertising, sending out sample copies, circulars, etc. All this costs money. I think I am safe in saying that for every new subscriber I have received, I have paid out $2.00 in advertising; hence I have often said that a publisher of a good journal could afford to send his paper one year free, for the sake of getting it into new hands. It would cost no more than other forms of advertising and would be very effective, but, for obvious reasons, this plan could not be put into practice, but I am going to come as near to it as I can. I have between 200 and 300 complete sets of back numbers for the present year, and as long as the supply holds out I will send a complete set, and the rest of this year free, to any one who will send me $1.00 for the Review for 1904. For a few particulars regarding the numbers already published this year, read the following:

Review for 1903

JANUARY illustrates and describes a Queen Incubator and Brooder which allows the bees access to the cells and queens at all times. It also contains several excellent articles on the subject of Commercial Organization among bee-keepers.

FEBRUARY contains a five-page article, perhaps the best ever published, on foul brood. It tells how to detect the disease with unerring certainty, to prevent its spread in the apiary, to keep it under control, build up the diseased colonies, secure a good crop of honey, and at the same time securely rid the apiary of the pest, all in one season, with almost no loss.

MARCH gives the portrait of a veteran bee-keeper of Michigan who manages out-apiaries 50 miles from home with only four visits a year, averaging a profit of $150 each visit. He describes his methods in this issue of the Review.

APRIL has a frontispiece of bronze blue showing Mr. T. F. Bingham's apiary and wintering cellar, and Mr. Bingham describes the cellar and its very successful management. L. Stachelhausen tells how to prevent both natural swarming and increase in an out-apiary, and secure a fine crop of honey.

MAY illustrates and describes a tank and method for fumigating foul broody combs with formalin. This is the largest tank and most extensive, successful experiment that has been made.

JUNE illustrates and describes the use of the cheapest power for hive-making, wood-sawing, feed-grinding, water-pumping, etc.—a power windmill.

JULY has articles from such men as R. L. Taylor and H. R. Boardman on "End of the Season problems," those problems that come up just as the honey harvest is closing and preparations for winter come on apace. Mr. McEvoy also tells how to treat foul brood after the honey harvest is over.

SEPTEMBER has an article from Mr. H. R. Boardman, in which he describes his wintering-cellar above ground, and tells how he succeeds in controlling the temperature and ventilation—sometimes using artificial heat. R. L. Taylor contributes an article on "Commercial Organization Among Bee-Keepers," in which he states the case so clearly that no more argument is needed.

OCTOBER is pretty nearly taken up with only two articles. The first is by R. L. Taylor on "The Cellar-Wintering of Bees." It is an old subject, but Mr. Taylor has the faculty of saying new things on old subjects. He covers the ground very completely, and gives many a useful hint to the man who winters his bees in the cellar. The other article is by the Editor, in which he writes of California as a bee-keeping State, giving eight beautiful illustrations made from photos taken by himself when on his recent visit to California. Several of these are full-page.

NOVEMBER or December will be a special number in which the editor will describe that paradise for bee-keepers, Northern Michigan, using a large number of cuts made from photos that he took last summer while on an extended visit to that region.

Perhaps you may have intend subscribing at the beginning of the year—subscribe now and you will get the back numbers—wait until January and it is not likely you will get them.

Superior Stock

The price of a queen alone is $1.50, but I sell one queen and the Review one year for only $2.00. Just at present, as explained above, as long as the supply of back numbers for 1903 holds out, all new subscribers for 1904 will receive them free. In other words, if you order soon, you can get the Review for 1903 and 1904 and a queen of the Superior Stock next spring, for only $2.

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Well, I'll Be Bumped!

I don't see what I have been thinking of all summer. Here I could gest as well sent to Griggs Bros. for my Supplies and saved all this freight I've been throwing away and got my goods cheaper, too. Don't see why I didn't send them a trial order sooner and find out what I was doin', long as they sell Root's Goods at their factory prices, gest as they said.

A Word to the Wise is Sufficient.

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in posts, staples and labor pays the difference in price, and then it lasts so much longer.
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This Emerson stiff-board Binder with cloth back for the American Bee Journal we mail for but 60 cents; or we will send it with the Bee Journal for one year—both for only $1.40. It is a fine thing to preserve the copies of the Journal as fast as they are received. If you have this "Emerson" no further binding is necessary.

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Beedom Boiled Down

Cross Bees and Light Clothing.

White clothing, says Mr. Hutchinson, saves the wearer some annoyance and stings. I have seen this stated before, but have been somewhat skeptical about it. Black buttons on a light coat, I am aware, will be attacked sometimes by bees because the buttons are suggestive of the eyes of an animal, and instinct seems to tell them these are vital. I imagine that a black hat on a person with white clothing might be the object of an onslaught of stings from bees enraged from any cause. My own notion is, if one were dressed in dark clothing, without any contrast of white or black spots in it, and all the surrounding objects were of about the same tint or darkness, cross bees would pay no more attention to it than they would to white clothing. But I am sure of this: That any thing black or dark-colored, surrounded by a white background, will attract their attention.—EDITOR ROOT, in Gleanings in Bee-Culture.

Great Difference in Bee-Keepers.

What a difference there is in bee-keepers! Some are slipshod and slovenly, with hives standing in a row close together on a plank—and some of them box-hives at that. How encouraging it is for an inspector of apiaries to get into such an apiary as that when looking for foul brood! Then there are bee-keepers of a little higher grade. They have movable-comb hives, or hives that are intended to be such, but no foundation starters have been used, and many of the combs might as well be in real box-hives. Then there is another grade still higher, but it is not the highest. It is the man who aspires to be a pretty good bee-keeper, but has too many other irons in the fire, and he neglects things. The frames are all stuck fast, and stuck together with brace-combs, and it is a task to get out a comb. Then there is the man who is a first-class bee-keeper. His hives are all made exactly alike. He uses foundation; he keeps the brace-combs scraped from the top-bars; his hives are level; the combs can be removed with the fingers with no prying from any knife or lever. Everything is orderly in his honey-house. He has

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☞ Building up a business is like building a house—you must start at the foundation and work up.—White's Sayings, in Printers' Ink.

a place for everything, and everything is in it. The covers are always put on square and true. Reader, in which class do you belong?—Bee-Keepers' Review.

Stores Necessary for Wintering.

We are constantly asked the question, "How many pounds of stores are necessary for wintering?" A good deal depends on the strength of the colony, and very much on whether it is to be wintered outdoors or indoors. The average outdoor colony in this latitude requires anywhere from 20 to 25 pounds; for indoors, from 15 to 18 pounds will make a safe allowance. The indoor colony may not consume during its actual confinement, more than 4 or 5 pounds, while the outdoor colony, during the same period, may not require more than 10 pounds. If this is the case, why should not every one winter indoors? Because it is not positively proven yet that the extra amount of stores consumed outdoors does *not* give a more vigorous colony in the spring.—Gleanings in Bee-Culture.

Alfalfa and Sweet Clover.

Many intelligent farmers prize red clover highly on account of its ability to gather nitrogen from the atmosphere, and they are slowly learning the values of other clovers as well. An important point to know, is the fact that for the success of any one of the clover family, including sweet clover, red clover, and alfalfa, there must be in the soil the bacteria that belong to that one plant, and there is hope that when the soil of the East becomes inoculated with the bacteria of alfalfa, it may succeed just as well in the East as in the West. The following is from J. E. Johnson, of Knox Co., Ill., in the American Bee-Keeper:

Alfalfa has been tried in Illinois for many years by different ones but without success until Prof. Hopkins began growing it on infected soil, where he has found it to do well, producing as high as 10½ tons per acre in a single season. Prof. Hopkins, of the Illinois Experiment Station, has, this year, sent infected soil to something like 200 farmers in Illinois for alfalfa growing, so Illinois bids fair to become an alfalfa-growing State.

Now, one thing more. Of all the bacteria that inhabit the soil and cause the clover to live from the nitrogen of the air, sweet clover is probably the most powerful of all, which shows plainly for itself, as it will thrive and produce both seed and honey in abundance on soil so poor that the worst weeds will not grow at all, and even on alkali land, that is poison to nearly all other vegatation.

Why is this? Simply that sweet clover, when aided by its own bacteria, lives almost entirely from the nitrogen of the air (of course, getting a small amount of phosphates, etc., from the soil). Not only so, but these nitrogen-gathering bacteria are constantly and silently gathering nitrogen—the most precious element to plant-life—and placing it in the soil.

One sweet clover plant will furnish a home in its tubercles for a thousand million bacteria, or even more. Now, in the far East are old farms which have become so deficient in nitrogen that they are considered worn out or worthless, and have been abandoned, notwithstanding these farms contain the other elements in abundance, or could be so with slight cost, as the other elements are cheap in price.

If sweet clover were sown on these same farms they could be made valuable and rich almost without cost. Infected soil would probably have to be also sown to get quick results, but when once set thickly to sweet clover, with their nitrogen-gathering bacteria, ten acres of the same would gather nitrogen from the air and fix it in the soil, when plowed under, faster than one man could haul it in a wagon from the nearest city in the form of barnyard manure. That despised sweet clover will some day be found to be the only hope of reclaiming many barren farms.

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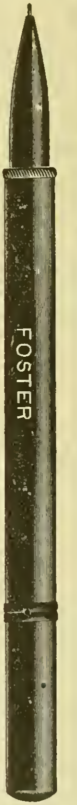

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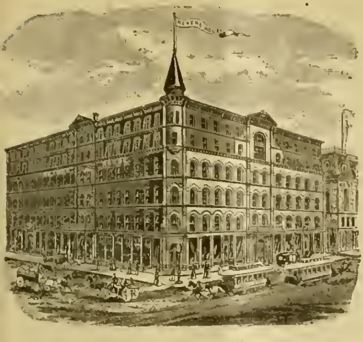

THE "REVERE HOUSE," CHICAGO.

Langstroth on... The Honey-Bee

Revised by Dadant—1900 Edition.

This is one of the standard books on bee-culture, and ought to be in the library of every bee-keeper. It is bound substantially in cloth, and contains over 500 pages, being revised by those large, practical bee-keepers, so well-known to all the readers of the American Bee Journal—Chas. Dadant & Son. Each subject is clearly and thoroly explained, so that by following the instructions of this book one cannot fail to be wonderfully helped on the way to success with bees.

The book we mail for $1.20, or club it with the American Bee Journal for one year—both for $2.00; or, we will mail it as a premium for sending us **THREE NEW** subscribers to the Bee Journal for one year, with $3.00.

This is a splendid chance to get a grand bee-book for a very little money or work.

GEORGE W. YORK & CO.
144 & 146 Erie Street, CHICAGO, ILL.

The Eye is more sensitive and subject to more diseases than any other part of the body. Ninety nine out of a hundred cases of poor or failing eyesight are due to simple little troubles that are easily cured; and most of the serious diseases of the eye that cause blindness begin with these simple little troubles. People usually rush to a spectacle dealer and buy glasses whenever they find that they cannot see clearly, which is like getting crutches for some little sore on your foot, instead of treating the sore. There are about 40 diseases of the eye, but only a few of them are painful, and it is natural to most people to think that if there is no pain, there is no disease; hence the most serious of these diseases are often neglected until they are so far advanced that when one goes to a specialist, he insists upon an operation and a big fee, or a long, troublesome course of treatment and a big bill.

One of the most useful things ever published is a little book on "Diseases of the Eye," which describes and illustrates the most common of these diseases and explains a simple system of treatment by mail by which the trouble is easily diagnosed and treated by simple, harmless remedies. This book is sent free by the Chilian Remedy Co, Bushnell, Ill. It shows how painful, dangerous and expensive operations can be avoided in the treatment of cataract and other eye diseases by using simple remedies discovered by one of the most famous eye specialists of the age, without using the knife or taking the chances of blindness, which often results from operations. Please mention the American Bee Journal when writing.

CONVENTION NOTICES.

Chicago-Northwestern —The regular annual meeting of the Chicago-Northwestern Bee-Keepers' Association will be held in the Revere House Club-Room, southeast corner of North Clark and Michigan Sts., on Wednesday and Thursday, Dec. 2 and 3, 1903. The Revere House has made a rate of 75 cents per person per night for lodging, when two occupy a room. Meals, 35 cents, or on the American plan at $2 per day. Owing to the Revere House furnishing FREE a place for holding our meeting, we feel that all who can do so should patronize them during the Convention Dr. C. C. Miller, Ernest R. Root, W. Z. Hutchinson, Emerson T. Abbott, N. E. France, Inspector J. Q. Smith, Jas. A. Stone and Huber B. Root have signified their intention to be present. Pin this in your hat. There will be one of the best meetings ever held in Chicago. Everybody come.

HERMAN F. MOORE, Sec.
GEORGE W. YORK, Pres.

P. S.—It has been suggested that bee keepers bring with them samples of honey, and such little appliances as they have that are considered handy to work with in the apiary.

Connecticut.—The Connecticut Bee-Keepers' Association will hold their fall meeting in the Capitol at Hartford, on Nov. 4. All bee-keepers are cordially invited to attend. For full information, write the Secretary.

MRS. EDWIN E. SMITH, Sec.
Watertown, Conn.

Missouri.—The Missouri State Bee-Keepers' Association will meet in Mexico, Mo., Dec. 15, 1903. J. W. Rouse will act as host to direct the attendants to the hall, which is free to all who desire to attend. Board may be had at the leading hotels at $1 to $2 a day. Come, everybody who is interested in bees and honey. Let us have a big meeting. We now have 51 paid-up members. Let us make it 100. Procure certificates from your local railroad ticket agents when you purchase your tickets. It may be you can return for ⅓ fare.

W. F. CARY, Sec. J. W. ROUSE, Pres.

Illinois.—The Illinois State Bee-Keepers' Association will meet at the State House, on Tuesday and Wednesday, Nov. 17 and 18, 1903. It has been so arranged that all who become members of the State Association on payment of an annual fee of $1.00 membership, will for the same be made a member of the National Association, and be entitled to all the combined reports of the State and Chicago Northwestern Associations. Efforts will be made at our coming meeting to give also a membership in the Chicago-Northwestern for the same $1.00 fee, providing it can be so arranged.

Railroad fare has been promised on all the roads in the Central Division of one fare for the round trip, and a fare and a third on the others; but we still hope for one fare on the latter. Will announce later, as to railroad fare.

JAS. A. STONE, Sec.
Route 4, Springfield, Ill.

WANTED—Extracted Honey.

Mail sample and state lowest price delivered Cincinnati. Will buy FANCY WHITE COMB HONEY, any quantity, but must be put up in no-drip shipping-cases.

C. H. W. WEBER,
2146-48 Central Ave., CINCINNATI, OHIO.
24Atf Please mention the Bee Journal.

For Thanksgiving Day

a rate of one fare and a third for the round trip has been authorized to points within 150 miles on the Nickel Plate Road, good returning to and including Nov. 30, 1903. La Salle Street Passenger Station, Chicago, Cor. Van Buren and La Salle Streets, on the Elevated Loop. City Ticket Offices, 111 Adams Street and Auditorium Annex. 'Phone Central 2057. 27—44A4t

☞ The majority of people are honest. Not from mere policy, but from the moral comfort honesty assures.—Printers' Ink.

"TELEPHONE FACTS FOR FARMERS"

a book of meaty telephone information giving just what the farmer wants to know about 'phones. A "straight from the shoulder" talk. A book that will post you how to buy right. Sent free if you ask for book F 4 Address nearest office.

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HONEY AND BEESWAX

MARKET QUOTATIONS

CHICAGO, Oct. 21.—Sales are not frequent, with No. 1 to fancy white comb honey bringing 13@14c per pound. To obtain 13½@14c it has to be perfect and in sections that will not weigh over 14@15 ounces: sections that weigh 16 ounces and over have to be sold at from 1 to 3c less per pound Extracted, white, sells at 6@7c in barrels; 6½@7½c in cans, according to quality. Beeswax, 28@30c. R. A. BURNETT & CO.

BUFFALO, N. Y., Oct. 11.—The demand for white comb honey is better than it was. The trade is particular and wants only very white, clean stock. If the wax is yellow from travel-stain it does not sell well, and price has to be cut. Fancy white comb, 14@15c; A No. 1, 13½@14c; No. 1, 13@13½c; No. 2, 12@12½c; No. 3, 11@12c; No. 1 dark comb, 11@12c. No 2, 10@11c. White extracted, 6½@7c; amber, 6@6½c; dark, 5½@6c. Beeswax, 28@30c.

W. C. TOWNSEND.

BOSTON, Oct. 8.—Comb honey continues to be in good demand. Fancy white honey in cartons we quote at 18c; No. 1, at 16c; glass-front cases fancy white, at 16c; No. 2, at 14c. Extracted honey, Florida, 6½@7½c, according to quality.

BLAKE, SCOTT & LEE.

CINCINNATI, Oct. 21—The demand for honey is a little better. The prices rule about the same. Extracted is sold as follows: Amber, in barrels, from 5@5½c; in cans about half cent more; water-white altalfa, 6@6½ cents; white clover, 6½@7½c. The comb honey market is quite lively, and it sells as follows: Fancy water-white, 14@15c. Beeswax in good demand, at 30c delivered here. C. H. W. WEBER.

ALBANY, N. Y., Oct. 18.—Honey market still firm for honey in comb and receipts not equal to demand; fancy white, 16c; No. 1, 15c; mixed, 14½@15c; buckwheat, 13½@14½c. Extracted, quiet; white, 7@7½c; mixed, 6½@7c; dark, 6@6½c. Beeswax, 29@30c. H. R. WRIGHT.

KANSAS CITY, Oct. 23.—Receipts of comb honey good; demand good; market easier. Receipts of extracted light. We quote: Fancy white comb, 24 sections, per case $3.00; No. 1, white and amber, $2.75; No. 2, $2.50. Extracted, white, 7c; amber, 5@6c. Beeswax, 25@30c.

C. C. CLEMONS & CO.

CINCINNATI, Oct. 1.—Comb and extracted honey are coming in freely, and the demand is good with steady prices. We are making sales at the following prices: Amber extracted at 5¾@6½c: white clover, 6½@7½c. Fancy comb honey, 15c. Beeswax, 30c.

THE FRED W. MUTH CO.

NEW YORK, Sept. 28.—Comb honey is arriving quite freely now, and is finding ready sale at 15 cents per pound for fancy white, 13@14c for No. 1 white, and 12c for No. 2 white and amber. Very little buckwheat on the market as yet, and prices are hardly established.

Extracted honey is ruling about the same as last with plenty of offerings of all grades.

Beeswax is somewhat declining and selling at present at from 28@29c per pound.

HILDRETH & SEGELKEN.

SAN FRANCISCO, Oct. 14.—White comb, 1-lb. frames, 13@14 cents; amber, 9@11c. Extracted, white, 6@6½c; light amber, 5½@6c; amber, 5@5½c; dark amber, 4¼@4½c. Beeswax, good to choice, light, 27½@29c; dark, 25@26c.

The outward movement continues lively. Three sailing vessels clearing the past week for England took an aggregate of 876 cases extracted, making the shipments from this port by sea in the past fortnight over 1500 cases. There have been tolerably heavy receipts in the meantime and there is still considerable offering. Market is rather easy in tone, extreme current quotations being more in accord with the views of holders than with the bids of wholesale operators.

WANTED! FANCY COMB HONEY

In no-drip shipping-cases. Also Amber Extracted in barrels or cans. Quote your best price delivered Cincinnati. The Fred W. Muth Co.
32Atf Front and Walnut, CINCINNATI, OHIO.

WANTED—Comb Honey in quantity lots. We are perhaps the only dealers in this article owning as much as 150,000 pounds at one time. Please state quantity, quality and price asked for your offerings. Thos. C. Stanley & Son.
24Atf MANZANOLA, COLO., or FAIRFIELD, ILL.

The Best Bee-Goods in the World....

are no better than those we make, and the chances are that they are not so good. If you buy of us **you will not be disappointed. We are undersold by no one.** Send for new catalog and price-list and free copy of THE AMERICAN BEE-KEEPER; in its thirteenth year; 50 cents a year; especially for beginners.

—THE—

W. T. Falconer Mfg. Co.,
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W. M. GERRISH, Epping, N.H., carries a full line of our goods at catalog prices. Order of him and save the freight.

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If you want the Bee-Book

That covers the whole Apicultural Field more completely than any other published, send $1.20 to

Prof. A. J. Cook, Claremont, Cal.,

—FOR HIS—

"Bee-Keeper's Guide."

Liberal Discounts to the Trade.

Hives, Sections, Foundation,

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M. H. HUNT & SON, Bell Branch, Mich.

Please mention Bee Journal when writing.

BINGHAM'S PATENT Smokers

25 years the best.
Send for Circular.

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SHEEP MONEY IS GOOD MONEY and easy to make if you work for us. We will start you in business and furnish the capital. Work light and easy. Send 10 cents for full line of samples and particulars.

DRAPER PUBLISHING CO., Chicago, Ills.

Long Tongues Valuable

South as well as North.

How Moore's strain of Italians roll in the honey down in Texas.

HUTTO, TEX., Nov. 19, 1902.

J. P. MOORE.—Dear Sir:—I wish to write you in regard to queens purchased of you. I could have written sooner, but I wanted to test them thoroughly and see if they had those remarkable qualities of a three-banded Italian bee. I must confess to you I am more surprised every day as I watch them. They simply "roll the honey in." It seems that they get honey where others are idle or trying to rob; and for gentleness of handling, I have never seen the like. Friend E. R. Root was right when he said your bees have the longest tongues; for they get honey where others fail. I will express my thanks for such queens. I am more than pleased. I will stock my out-apiaries next spring with your queens.

Yours truly, HENRY SCHMIDT.

The above is pretty strong evidence that red clover is not the only plant which requires long-tongue bees to secure the greatest quantity of nectar.

Daughters of my 23-100 breeder, the prize-winner, and other choice breeders: Untested, 75 cents each; six, $4 00; dozen, $7.50. Select untested, $1.00 each; six, $5.00; dozen, $9.00. Safe arrival and satisfaction guaranteed. Circular free. I am filling all orders by return mail, and shall probably be able to do so till the close of the season.

J. P. Moore, L. Box 1, Morgan, Ky.
31Atf Pendleton Co.

Please mention Bee Journal when writing Advertisers.

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We guarantee Satisfaction. What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING. No LOSS. PATENT WEED-PROCESS SHEETING.

Why does it sell so well? Because it has always given better satisfaction than any other. Because in 25 years there have not been any complaints, but thousands of compliments.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

Bee-Keepers' Supplies OF ALL KINDS *****

Very fine pure-bred BARRED PLYMOUTH ROCK Chickens and Eggs for sale at very low prices.

Langstroth on the Honey-Bee—Revised,
The classic in Bee-Culture—Price, $1.20, by mail.

BEESWAX WANTED at all times.

DADANT & SON,
Hamilton, Hancock Co., Ill

Please mention Bee Journal when writing.

6 Percent Discount

DURING THE MONTH OF OCTOBER.

There is every evidence that there will be a heavy demand for goods the coming season; and if you defer placing your order until next February or March, you will not only lose your discount, but may have to wait for the filling of your order some weeks. Indeed, you can afford to borrow money, and get your goods now, thus having them all ready for next season's use.

Every Month You Wait, it will Cost You 1 Percent Per Month.

The styles of goods will be about the same for next season, so there is no use waiting for a new Catalog. But remember prices have advanced, owing to the increased price of material; but if you

Take Advantage of Our Early-Order Discount

you will not be paying any more for your goods than last year. A word to the wise is sufficient.

The A. I. Root Co., Medina, Ohio.

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AMERICAN BEE JOURNAL

43d Year. CHICAGO, ILL., NOV. 5, 1903. No. 45.

No. 1.—Apiary of S. T. Crim, of Sangamon Co , Ill.

No. 2.—Apiary and Family of the Late Louis N. Meyer, Sr., of Niagara Co., N. Y.

No. 3.—Apiary of A. W. Swan, of Nemaha Co., Kan.

No. 4.—Apiary of Peter Fleming, of Clinton Co., Iowa.

No. 5.—Apiary of S. A. Matson, of Nodaway Co., Mo.

No. 6.—Apiary of C. A. Fairbanks, of Jones Co., Iowa.

THE AMERICAN BEE JOURNAL.

PUBLISHED WEEKLY BY

GEORGE W. YORK & COMPANY
144 & 146 E. Erie St., Chicago, Ill.

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EDITOR,
GEORGE W. YORK.

DEPT. EDITORS,
DR. C. C. MILLER, E. E. HASTY, EMMA M. WILSON

IMPORTANT NOTICES.

The Subscription Price of this Journal is $1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

The Wrapper-Label Date of this paper indicates the end of the month to which your subscription is paid. For instance, "dec03" on your label shows that it is paid to the end of December, 1903.

Subscription Receipts.—We do not send a receipt for money sent us to pay subscription, but change the date on your wrapper-label, which shows you that the money has been received and credited.

Advertising Rates will be given upon application.

National Bee-Keepers' Association

Objects of the Association:

1st.—To promote the interests of its members.
2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

ANNUAL MEMBERSHIP, $1.00.
Send dues to Treasurer.

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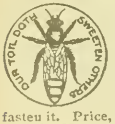
☞ If more convenient, Dues may be sent to the Secretary, at the office of the American Bee Journal.

A Celluloid Queen-Button is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-lapel. It often serves to introduce the subject of honey, and frequently leads to a sale.


OUR TOIL DOTH SWEETEN OTHERS

The picture shown herewith is a reproduction of a motto queen-button that we are furnishing to bee-keepers. It has a pin on the underside to fasten it. Price, by mail, 6 cents; two for 10c; or 6 for 25 cents. Send all orders to the office of the American Bee Journal.

Something About Our 1st-Page Pictures.

No. 1—Apiary of S. T. Crim.

The preacher's boy came over, and he had a little box in his hand that looked like a toy canon. After he had opened it he said he would shoot. I told him to cut loose, and here we are. My wife and little niece pretended to be bee-keepers, and they got shot, too. Our cousin from Springfield was standing in the shade of a plum-tree, and you see she is still in the shade.

This is only a part of my apiary. I have 68 colonies, starting last spring with 26. My bees are doing well this season. I caught several stray swarms and doubled up the small swarms.

I am 63 years old, and have worked at the blacksmith trade since I was 17, but have retired from such labor. I have kept bees for 30 years in the old-fashioned way, and I never knew there was such a thing as a bee-paper published until three years ago. You see I have lost all these years whereby I might have been a rich man in the bee-business. Since I have been reading the American Bee Journal I have found out a way to make bee-keeping profitable. Two years ago I tore up all my box-hives, and now have my bees in 8-frame dovetailed hives. I do love the hum of the honey-bees. Oh, what music they make!

Well, this little niece of ours is named Miron Cooper; she goes among the bees and never gets stung. She is 5 years old. Some time ago a swarm came out and settled on a small cherry-tree. Little Miron said she would help me hive them. So she skipped out, and I got the hive ready and went out to the tree, and there she was up the tree above the bees helping herself to the cherries.

The last of June I run out of hives, and could not wait to get them from the dealer, so I resorted to nail-kegs. I got along very well until I filled the third keg—I had too many bees, they could not all get in the keg, and in the evening they left it. I prepared another, and hived them as before; the next day they swarmed again, they crossed the street and settled on a plum tree in my neighbor's yard, so I prepared another keg and took it over and put the keg under the plum-tree, and set the ladder up to bring them down. They must have seen the keg, for they let go and departed across the corn-field to parts unknown. I said, "Good-by."

I was amused at my neighbor. The next day he said, "Your swarm of bees left you, and did not take their queen with them." I asked him how he knew the queen was left behind? He said: "Because his wife told him the queen got after her and run her into the house." I told him it was a drone!

S. T. CRIM.
Sangamon Co., Ill., July 28, 1903.

No. 2—Apiary of Louis N. Meyer.

Mr. Louis N. Meyer, Sr., passed away about a year ago. Louis, Jr., is shown in the picture with the rest of the family. Their bees are mostly Italians, in modern hives. The parents of Mr. Meyer, Sr., had kept bees in Germany. Louis, Jr., reports that they had very few colonies until his father subscribed for the American Bee Journal, then the apiary increased to about 45 colonies. The father's desire was that Louis, Jr., stick to the bee-business, which he is faithfully doing.

No. 3—Apiary of A. W. Swan.

I send a photograph of my apiary, or rather what is left of it, which was taken in July, 1902, there being at that time 70 colonies of bees, and at the present time there are 42 left. I lost 28 colonies through the winter and spring. We have had three very poor seasons here in Kansas, either too dry or too wet, mostly wet. For the last year it has rained nearly all the time during clover bloom, and it is still at it. It has rained every day except one since white clover commenced blooming, which was about May 20. I have been feeding up to the present time, and to-day the bees are booming on white clover, and yellow sweet clover, which is blooming well.

A. W. SWAN.
Nemaha Co., Kans., May 4, 1903.

No. 4—Apiary of Peter Fleming.

It seems to be quite fashionable for bee-keepers to send to the Bee Journal pictures of their apiaries for publication, so I thought it might not come amiss to send a picture of a portion of one of my apiaries.

I am running for comb honey exclusively, not the so-called, but the genuine, and of the choicest quality. The picture was taken June 28, 1903, and shows that the bees are doing fair business for the time of year.

The apiary is under two apple-trees that are well laden with fruit, as one can judge by the number of props under the limbs, and "your humble servant" standing against one of them. They are past 50 years old, and still bear well, the bodies being 2 feet in diameter. The ladder seen standing between the hives is where we went after a swarm; they get the start of me and drive out an occasional swarm, and I have other duties and cannot give them proper attention, but I give them as good attention as a one-horse bee-keeper can.

PETER FLEMING.
Clinton Co., Iowa, July 22.

No. 5—Apiary of S. A. Matson.

I send you a picture of my bee-yard, in which there were about 60 colonies when it was taken. The hives face east, and the picture was taken from the northwest. The two trees on the left are apple, and the others are peach trees. The picture was taken the latter part of September, just after the supers had been removed.

Last year (1902) was a poor one; the bees stored but little surplus, and that of very poor quality. Our main source is white clover, and it did not afford anything.

S. A. MATSON.
Nodaway Co., Mo.

ESTABLISHT IN 1861
AMERICAN BEE JOURNAL
THE OLDEST BEE-PAPER IN AMERICA

43d YEAR. CHICAGO, ILL., NOV. 5, 1903. No. 45.

Editorial Comments

An Invitation to Subscribe.

This number of the American Bee Journal will go to several thousand bee-keepers who are not now getting it regularly. Will such please consider this an urgent invitation to subscribe? We want you on our list of regular weekly readers. A good time to begin to read the Bee Journal is now. Read during the coming winter, and thus get ready for (bee) business next spring.

Get a Book About Bees.

In replying to a set of questions sent in by a subscriber, the British Bee Journal prefaces its answers by saying:

> "The first advice we offer to beginners is to procure a 'Guide-Book' on bee-keeping, without the help of which it is like groping in the dark with bee-operations."

That bit of advice is one that holds good as well on this side the ocean, and applies to all localities. Whether you call it a "text-book," "bee-book," "guide-book," or what-not, a book of instruction in bee-keeping is indispensable, and the bee-keeper who tries to get along without one is penny-wise and pound-foolish.

Smoking Hives at the Entrance.

This is condemned by some as seldom or never necessary. It is well to be considerate of the feelings of the bees, and drenching with a volume of smoke sufficient to drive them out of the hive is to be deplored; but if smoke is to be used at all, it should be used where it will do the most good, and where the least amount will suffice. Many of the veterans make a practice of giving a preliminary puff at the entrance, and they seem to have good reason for it. For the bees, whose special duty it is to guard against intruders—the ones that dart out to attack an approaching enemy—are not stationed in the innermost recesses of the hive, but at the entrance. The first jar caused by the opening of the cover is the signal for them to rush forth, and once out they are not easily pacified. A little smoke at the entrance, before the hive is touched, may prevent their issuing at all.

Ventilation of Hives in Winter.

How much ventilation shall I give my bees for winter? is the question that will now be asked by many. If your bees are to be cellared, you can not give too much ventilation, and it matters little where it is given—this referring to the ventilation of the hive, not of the cellar. In the time of box-hives, the right thing to do was to turn the hive upside down, leaving it entirely open above. If the ventilation is given in the usual way—at the bottom—the bottom-board may be left off and the hive raised in some way so air will have free access. Or, the hive may be raised from the bottom-board by blocks at the corners. An excellent way is to have bottom-boards two inches deep, with the front entrance entirely open.

For out-door wintering, give strong colonies an entrance of 3 square inches—weaker colonies in proportion. That would mean an entrance ¾x8, ½x6, etc.

The Bee-Keepers' Convention Season.

This usually opens with the annual meeting of the National, which, this year, was held in Los Angeles. Then follow, a little later, the Illinois State, Chicago-Northwestern, Minnesota, Colorado, Ontario (in Canada), Michigan, California, Wisconsin, etc.

We notice that several other States are planning to hold conventions, notably Missouri, Ohio, Kansas, etc. Some day we hope there will be a bee-keepers' organization in every State.

Bee-keepers in this country have not begun to attend conventions as they do in Europe. We have all been too busy with other things to get away, it seems. At least it appears that such has been the case. But bee-keepers need to "turn over a new leaf" in this regard. Conventions are a wonderful incentive and inspiration. They are suggestive, too. One often hears things said on such occasions that, if remembered and practiced, are often worth several times over the expense involved in attending the convention.

And then the personal contact with others in conventions. How invaluable is that. We would not take a great deal for the pleasure and help it has been to us in meeting the leaders and experts of beedom at the conventions we have attended. The only time we ever saw Father Langstroth was at a convention—the last one he ever attended, for he died about a month thereafter.

Plan to attend just as many conventions of bee-keepers as you possibly can. You will not regret it, either in the present or after years.

Keeping Ants Out of Hives.

In Gleanings in Bee-Culture, H. A. Higgins tells of beating the ants in the following manner:

> Stakes are made 7½ inches long, and made of 2x4 scantling; and instead of being sharpened and driven into the ground they are sawn flat, fastened on the ends of the 2x4, on the bottom-board, and the ends inserted into old (or new) quart fruit or tomato cans; and each morning the cans are filled with fresh water. The ground around the hives is sometimes alive with ants, but they never get into the hive. I have seen only one ant on the hive since I have used the cans, and that was caused by neglecting to fill the cans for two or three days. The only trouble to speak of is filling the cans, and that is not much when you take into consideration the good derived from it, as the bees will water at the cans, and will not have to go far for water. I have never seen a bee at my watering-trough, which stands about 20 steps from the hives. They all water from the stakes.

There is nothing particularly new in this, and in the North ants are seldom so troublesome as to warrant taking so much pains, but in the South they become a serious matter.

Why Do Bees Ball Their Own Queen?

It is not an infrequent thing to find bees balling their own queen. Why? Some say they are roused to anger by being disturbed, and then attack the queen. Others say they cluster about the queen to protect her. There seems rather more reason for the latter view. The queen is the most important "personage" in the queendom, and why should they not be solicitous for her welfare? The outcome favors such a view, for when the queen is found balled by her own bees, if the hive is quietly closed at once, the queen will be found all right at the next visit. That, after all, is the important matter to know—that the thing to do to insure the safety of the queen is to close up the hive at once. If disturbance is continued, the bees may hug the queen long enough to starve her, even if they do think they are thereby saving her.

Importance of Reading Bee-Papers.

This can hardly be over-estimated by any one who desires to make a real success of keeping bees. We do not say this because we have a bee-paper to sell, but because it is true. Read what Mr. W. L. Coggshall says on this subject, in a late number of Gleanings in Bee-Culture:

> When I see a good labor-saving device it makes my heart glad; or when some bee-keeper writes an article that gives a shorter cut for doing anything, it pleases me, and I say to myself, "He is a benefactor." To be an up-to-date bee-keeper one must read everything between the covers of the bee-journals, advertisements and all. Don't skip a thing if you are starting in to make money out of bees.
>
> Out of the 15 young men who have worked for me at bees, 12 are still doing so for a living. The most successful ones are farmers' boys who were willing to do any kind of work on the farm. The most successful ones are those who read the most, and talked bees at all times and places.
>
> I wish to emphasize the fact that a desire to talk bees is important. It is better to have it as a hobby if one would succeed.

When it is remembered that Mr. Coggshall is one of the very largest bee-keepers in the world, his words should have some weight.

The fact is, a bee-keeper, like any other business man, can not know too much about his business. No one bee-paper, no more than any one man, contains all the information there is to be had. So it is best to read as much as possible, and from as many different sources as one can. And if you don't see what you want of practical information in the American Bee Journal, all you have to do is to ask for it—that is, if you are a regular paid subscriber to it. Of course, any bee-keepers who are not subscribers to this journal, have no right to its invitation to ask questions whenever they so desire. Not even a bee-paper can be run very long on air alone. It takes *cash* to pay for white paper, press-work, printers, etc. But every honest person is glad to pay for what he gets that is really valuable.

The Literature of Bee-Keeping.

Did you ever think of the valuable and helpful literature that the industry of bee-keeping has developed in the past 50 years? Not only can those who seek information concerning bee-culture and honey-production find it in the large and complete volumes of bee-books, but the current publications, issued weekly, semi-monthly, and monthly, afford most lively and up-to-date reading. Current events, as related to bees and bee-keeping, are reported, and thus put in permanent and useful form.

How many present-day bee-keepers ever stop to think of the advantage they have over their predecessors of a half century ago? The growth of recorded information has been wonderful. Now, by getting one of the several excellent bee-books, and one or more of the bee-papers, any one with a little determination and application, can soon learn to handle bees profitably, and with much pleasure as well. But no one should think of starting with bees without first getting one of the best books on the subject. Even if one never does a thing with bees, such a book is well worth reading, simply for recreation and general information, if no higher motive.

Of course, the bee-papers will be found in the home of every bee-keeper who expects or desires to be successful with bees. It takes too long to discover everything by and for one's self. Life is too short, and competition too fierce now, to permit the ox-cart method of travel when the automobile method can be had. Read up in winter, and practice in summer, is a pretty good way to proceed. To be sure, some reading by way of current bee-papers should be done at all times of the year. Reading and practice. Both are needed.

Horizontal Bar in the Brood-Frame.

Frank McNay, of Los Angeles Co., Calif., writes as follows:

> On page 643, is mentioned a horizontal bar instead of wires in brood-frames. Can you tell us how it is put in the frame, dimensions of stick, etc.? Also, is a full sheet of foundation used, or two half sheets?

The Australian journal, from which the clipping was taken, made no mention of particulars, but it is quite probable that the middle bar was simply a bar the same length as the inside length of the frame, two half sheets of foundation being used. Better not try it on too large a scale at first.

Honey-Prices in England.

These seem better than on this side, so that the British bee-keeper may well be satisfied with a smaller yield. Twenty-five cents for comb, and 12 for extracted, are spoken of as prices not unusual.

Miscellaneous Items

Ohio Bee-Keepers are at work trying to secure a foul-brood law. Success to them.

Editor E. R. Root announces in Gleanings in Bee-Culture that in the coming election for National Association directors, he is not a candidate for re-election. The office of director is no sinecure, and one can hardly blame Mr. Root for desiring to cut off some of the many demands upon his time, but his declining to serve longer will be a matter of regret to many, for he has been a most efficient officer. It will not be easy to find so faithful and conscientious a successor.

Herman F. Moore, of Park Ridge, Cook Co., Ill., has been appointed a deputy inspector of apiaries for northern Illinois. He is about 15 miles northwest of Chicago. Any bee-keepers who may desire his services at any time, should address him as above. Mr. Moore is the hustling secretary of the Chicago-Northwestern Bee-Keepers' Association, and to his untiring and faithful efforts, more than to any other one person, is due the success and prosperity of that organization.

Buckwheat Cakes and Honey.—Four-year-old Garland is devoted to his young and beautiful Aunt Louise. One morning, as she was talking to him from the second-story window while he gave her ecstatic answers from the brick sidewalk, he suddenly held up his chubby arms and called up to her:

"Throw yourself down in my arms, auntie! I'll catch you."

"Why, Garland, if I were to do that," his auntie said, laughing, "I might make a buckwheat cake of you."

"Well, then, auntie," said the gallant little lover, "I'd be the buckwheat cake and you'd be the honey!"—Selected.

O. O. Poppleton, of Dade Co., Fla., wrote us as follows Oct. 24, 1903:

> FRIEND YORK:—I expect to leave in about a week for a six or eight weeks' cruise in my launch down among the Florida Keys. We will visit both the coral and the sponge reefs while gone. We will be almost entirely away from mail facilities, getting letters only; no papers while gone. We will live in our boat, moving from place to place as the notion takes us. Such a life down here in the tropics will be a little different from the one you will be living with all the surroundings of a big city, with the cold and storms of the North.
>
> With well wishes for Mrs. York and yourself,
>
> Yours as ever, O. O. POPPLETON.

What a nice time Mr. Poppleton will have in that delightful summerland—or summer*water*—trip. It does seem that some people are more fortunate than others. But we are glad our good friend can have such an outing. It will do him good.

Look at Your Wrapper-Label.—According to the ruling of the Post-Office Department at Washington, as announced heretofore in the Bee Journal, unexpired subscriptions to any newspaper or magazine do not constitute legitimate subscriptions, so as to maintain the second-class rate of postage. In view of this, we are compelled to stop sending the American Bee Journal as soon as the subscription or time paid for expires.

Please look at your wrapper-label, and if it reads "nov03," it means that your subscription ends with this month. If it is "dec03," it will expire with the end of next month.

We trust that all whose subscriptions expire will renew promptly, so as not to miss a single copy of the old American Bee Journal. Remember our liberal offers, which we will repeat here: Two years for $1.80; 3 years for $2 50; or 5 years for $4.00.

Also, when sending in your own renewal, why not get a new reader for a year, to send with it? For securing *two* new subscribers (at $1.00 each), we mail you free a copy of Dr. Miller's book, "Forty Years Among the Bees;" or for three new subscribers (at $1.00 each) you can have your choice of either Prof. Cook's "Bee-Keepers' Guide," "Langstroth on the Honey-Bee," or "A B C of Bee-Culture," Surely, here is an opportunity to get some splendid bee-literature for a very little effort. Either of the last three books with the Journal a year, both for $2.00.

But, above all, don't let your own subscription expire. There will soon be just one department that will be worth, several times over, the amount of a year's subscription. This will be announced later. But think of all the other helpful departments in the Bee Journal each week! The American Bee Journal will simply be invaluable the coming year. A good many say it is that now.

Convention Proceedings

THE LOS ANGELES CONVENTION.

Report of the Proceedings of the 34th Annual Meeting of the National Bee-Keepers' Association, Held at Los Angeles, Calif., Aug. 18, 19 and 20, 1903.

(Continued from page 695.)

REMINISCENCES OF BEE-KEEPING AND BEE-KEEPERS IN THE EARLY DAYS.

J. S. Harbison—I did not expect to be called on here to make a speech. I have been a worker and not a speaker, and if I give you a rambling talk, it will be all you should expect.

I may as well start out a little on the lines my friend, Mr. Root, who has just preceded me, has suggested, and go back to the early trials and tribulations of bee-keeping in my experience.

My father kept bees from my earliest recollection, and I became the owner of bees at quite an early age, and did much of the work of taking care of my father's apiary, which consisted of probably 20, 30—50 hives at most.

I came to California in 1854, landed in San Francisco Nov. 20, which will be 49 years the coming November. My first experience was the importation of fruit-trees, which I carried on for two years, and laid the foundation for those great orchards on the Sacramento River, extending from Marysville to Lower Sacramento.

During those two years I studied the flora of California, and became satisfied that bee-keeping would succeed. After I had made a shipment and returned, I sold out my tree and nursery interests in the winter of '56, and returned, say in April, '57, with the intention of preparing a shipment of bees for California, and I made that shipment, as I did not know of there being any bees in California until after my getting the shipment to California.

When I returned to my home in Lawrence Co., Pa., and there prepared my bees, I took chosen lumber, had it sawed out about ⅜ of an inch thick, and made boxes of about a cubic foot capacity. I made them light, because we had to pay at the rate of about $1.00 a pound freight from Newcastle, Pa., to Sacramento, hence it required economy in preparing the hives. When I was ready to ship them I added a chamber of about 3x8x13 inches, as a place for them to get off their combs and carry out their dead during the voyage, and that was ventilated by a wire net, giving some ten inches of wire ventilation.

I started with 116 of these colonies, and got all through except six. Six were entirely dead on arrival. Of course, they were all reduced in numbers. While I was preparing these bees at my old home, my old neighbors there thought that I must be a little "off." I never could get them to California, they said. My father tried to persuade me that it was not a good thing for me to do, and all that. They tried to persuade me, but it had no effect on me. I said, "Father, I am doing this with my own money, and if I succeed, well, and nobody will be the worse for it." Then he tried ridicule. He named them "the dollar hives," when our neighbors all joined in and said I was preparing dollar hives, but I went on just the same.

When I prepared these to ship in November, I had to take them on canal boats from Newcastle, Pa., to Rochester on the Ohio River, and from there on a steamer to Pittsburg, and from there by rail. They were taken to the Union Depot in Pittsburg, hauled in there, perhaps, about 1 or 2 o'clock in the afternoon, and the train did not go until evening. While they were being transferred by the express company, I was to have supervision and direction, so I staid pretty close to my bees during that time, and as people came into the train, as is usual preceding its departure, the hives sat there, very plainly marked "Sacramento, California." I heard many uncomplimentary remarks. Some of those people had been in California. There were no bees there; there was nothing for them to work on when they got out there. There must be some fool; and some put it a little stronger than the simple word fool.

Very near train time, however, there came along an undersized gentleman, very nicely dressed, and he took in the situation, looked around, singled me out as the owner, and said, "Are you the owner of these bees?" I said, "Yes."

"I see they are marked for shipment to California." I said, "Yes, I am going to take them to California."

He said, "Have you been there?" I replied, "Yes."

"Have you ever been engaged in bee-keeping?" I said, "Yes."

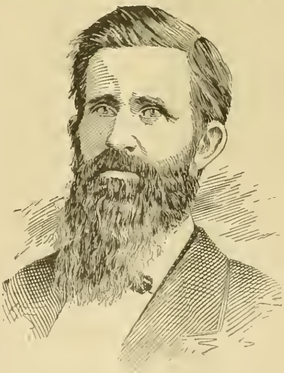
"Do you know you can get them there?" "Yes," I said, "I have letters from the head agents of the steamship companies," naming them, that is, the steamship companies in New York, and the Panama railroad. "I have arrangements made by which I am assured of every facility at their disposal for getting them through."

These questions were so pertinent, and the people became so interested, that there was a great crowd around. Then the murmur started, what a great enterprise it was, what a great undertaking. This gentleman shook hands with me and said, "I hope you will get there safe. Indeed," he said, "I am very sure you will, for you understand the business." It made it a little bit trying for me. I was comparatively a young man, but very resolute and self-willed to do what I thought I could do, and which I did do.

I got them through. Every facility was afforded me. I went down with Capt. R. L. Whiting, of the Steamship "Golden Gate." I had made his acquaintance on my trip down to Panama, told him of my plan, and he said, "If you should be so fortunate as to connect with my ship in going out, I will take great pleasure in affording you every facility in my power."

When I reached Aspinwall with my bees, who should I meet on the gangway but Capt. R. L. Whiting? He recognized me at once, inquired if I had the bees, etc., and congratulated me that I was getting along all right, and gave me some information as to getting them across the Isthmus. And so with the kind assistance of those men who were willing to assist in the introduction of new enterprises into California, I got there, made a success of it, and it has given me great pleasure to know of the success that has attended bee-keeping here in California.

Then the bees sold readily for two years at $100 a colony in Sacramento. My "dollar hives" increased somewhat in value when they were sold at $100. I presume there are some of you bee-keepers here who probably paid something like that for bees. I knew colonies that I had sold at $100 were resold by other parties at $200, and then they made money out of them.



J. S. HARBISON.

A Member—There is a Mr. Hale, that was alongside of me 12 years in Los Angeles, and he said he bought 15 colonies from you and paid you $1500.

Mr. Harbison—I remember that. They located them in the city of Sacramento. That is correct.

That is my experience in the importation of bees into California. After I got them here I found about nine colonies had been imported before mine, but by a man who had no knowledge of the handling of bees. One man had to have some knowledge. I think his name was Howell, and he was killed by the blowing up of the Steamship Jenny Lind, in San Francisco Bay, or somewhere in those waters. I think he had brought out three colonies. So that defeated his establishing the business. Those bees were taken to San Jose, a place not so well adapted to bees as the Sacramento Valley, so, while I did not bring the first bees to the State, it was my experience and success in increasing and showing what could be done with them that started the business of bee-keeping in California.

Question—Did you get nice yields of honey right away?

Mr. Harbison—My first year was devoted to increase.

Question—You didn't work for honey?

Mr. Harbison—I worked for honey considerably in '58. I invented my hives, and invented section-boxes there in Sacramento in the winter of '57, after I got the bees out. I made the first exhibit of section-box honey at the California State Fair held in Marysville, September, 1858. I took the highest premiums that were given. There was a Mr. Appleton, I think, from San Jose, that took a little box of honey there to Marysville and set it out, but I was told by a friend that he went there in the morning before I got around, saw my exhibit, and then went and took his box of honey away, so that it did not appear again. I was threatened with competition, but it didn't pan out.

Mr. Root—What price did you get for honey in those times?

Mr. Harbison—I sold those sections at $2.00 a section, two pounds in a section. That was $1.00 a pound, and it sold readily. I made four observatory hives, and one or two oval hives of the same pattern, which I still use. There at Marysville it attracted a very great deal of attention. Then I think it was the next year there was a large Agricultural Hall built in Sacramento, and I exhibited there. I exhibited a full set of observatory hives, showing the queens in all stages of growth, and the conditions of the bee, illustrating them, and my exhibit was placed in the basement, where all agricultural products were placed. I I had a very fine observatory hive, which I have yet, but it has not been used for a great many years, and the managers of the fair came to me and asked my permission to locate that hive according to their ideas. I, of course, granted it. It was a gratification to me, and they took it upstairs. There was a fountain in front of the speaker's stand, and they located it right in front of the fountain. During the evening they had to have a policeman there to keep the way clear so that the visitors could pass and see that hive. It was acknowledged to be the most attractive one item exhibit at that fair. Of course, I was awarded the highest premiums that their rules would allow, and those exhibits, and the success that I met with, started quite a furore in bee-keeping, and, unlike many other booms that have taken place in California, it has kept on. Of course, prices fell, but it has been a continuous growth ever since. It gives me great pleasure to be here and give you a little idea of what we have passed through in fetching about this industry.

Dr. Miller—Can you tell us how much it cost you to get those 110 colonies you brought from Pennsylvania by the time you set them up here?

Mr. Harbison—In the neighborhood of $1800.

Mr. Root—When was your book published?

Mr. Harbison—In 1861. I wrote it in Sacramento. It is out of print, and there are very few copies to be had. They are scattered over California, a good many of them.

By the way, I sent the first case of comb honey that ever went across the continent. I put it in the first car of green fruit that was ever shipped from Sacramento, or from California. That car-load went to Chicago, and that case was the first case of California honey ever sold East.

Mr. Root—Tell us about your experience in sending car-loads across.

Mr. Harbison—We didn't send car-loads until we introduced bee-keeping down in San Diego. I had a friend down there, a Mr. Pardee, a relative, I suppose, of our present Governor. He had made some investigation down there as to the flora of San Diego, and he was satisfied that bees would do well. I had a friend, Mr. R. G. Clark, who lives in San Diego, whom many of you know. He was not engaged then in any enterprise, and his brother having bought bees, and having made a fine success of it, and having learned from his brother, they conceived the idea of Mr. Clark going down there with his bees. We took 110 colonies and landed them in San Diego. Nov. 28, 1869. Those were the first bees landed in San Diego.

Question—When did you get Italians?

Mr. Harbison—In San Diego; I think from Mr. Quinby. Then I got others in '65. We landed those bees down there in San Diego in '69, and Mr. Clark and I were in partnership four years there. and in that time established four apiaries, and when our time expired he took two and I took two. He ran his two apiaries for the first season afterward, which was the year 1874, which was the best season we ever had. Then he sold out, and took the money, which was quite a considerable sum that he made during that time, and planted the first vineyard and eucalyptus grove ever planted in this valley, and to which is due the first raisins ever raised in San Diego County, a fact which, I think, may have been lost sight of. Others may have been credited with being the pioneer, but he is the pioneer raisin-grower in San Diego County.

Question—What is the greatest number of colonies you ever kept in one place?

Mr. Harbison—600 colonies.

Question—How much did they yield?

Mr. Harbison—They yielded an average of over 150 pounds of comb honey per colony, in 1864. That was the Honey Springs Apiary, near Lyons' Peak, in San Diego County. I had some apiaries there that had 400 or 500 colonies. I think I had as many as 500 colonies in this Sweet Water Apiary that I still own there, which is the last of my apiaries. I think the greatest number I had at any one time was about 3750 colonies, divided around in 12 apiaries.

Question—What was the largest crop in any one year?

Mr. Harbison—I can not give you the amount of the product, but it was considerably over 100,000 pounds.

Question—What was honey worth at that time?

Mr. Harbison—The first car-load was sold to C. O. Perrine, of Chicago, for 27 cents a pound, delivered in Chicago. I reserved, however, a few cases, perhaps 20, and placed in the hands of Graff & Co., to be sold as an experiment, and I think they realized 28 cents for me. The freight-rate, I think, was about 3 cents a pound gross on the car-load.

Question—That was extracted honey or comb?

Mr. Harbison—That was 2-pound sections. I have always produced 2-pound sections, and when I have ceased to do that, I shall have ceased to produce any honey. I have one apiary left which I want to sell. If I am spared to the 28th of September, I shall have passed the 77th landmark of my age, so it is time I had my apiary sold and somebody else was running it. It is for sale.

Question—In what year did you send those first cases of honey with the car-load of fruit to Chicago?

Mr. Harbison—It must have been exhibited at Marysville in '58, and Sacramento in '59. It was the first year after the railroad was completed. I think it must have been in '61 or '62, somewhere along there; anyhow, the first season after the railroad was opened overland. This car-load of honey that was shipped from San Diego—it must have been in '71 or '72 that we sold it to Perrine.

When we took the bees to San Diego, I had a little of the same experience in the way of comments that I had when I made my early shipments to California; that is, there was nothing for the bees to feed on in San Diego, hence it was a foolish enterprise to take bees there! But when we began to take our honey there, and going on board the steamer, they began to inquire how much we were getting a pound for it; they changed their minds, and were desirous of going into the business.

Now, to go back to the question that is affecting you all, I want to give you a little bit of history of the introduction of foul brood into California, and my experience with that.

In 1858, a man named Wheaton came to my place and visited me a number of times under pretense of buying bees, but, as I suspected at the time, and as was afterwards proved, simply to get the secrets of my success in the handling of bees. However, late in the fall of '58, he arrived at Sacramento with quite a large number of bees, somewhere from 80 to 100 colonies. I inquired where he got them. He said he got them from Quinby—out of Mr. Quinby's winter quarters.

He placed them within three-quarters of a mile of my apiary, a great many of them in bad condition. I did not know anything of foul brood then, for we did not have any in western Pennsylvania, and I supposed that foul brood was really chilled brood. He complained that my bees were robbing his. I went to make an examination, and remembered what I had read of Mr. Quinby's writings about the disease, and recognized what was the matter. That disease was imparted to my apiary, and altogether I think I destroyed somewhere from 60 to 90 colonies, because I applied heroic treatment—burned them up, hives, honey and all. But even that failed to eradicate it, but I kept at it for two or three years, until I got it killed.

But, fortunately for me, I had established another apiary two or three miles from my home apiary, out of reach of these infected bees. I had sold 250 colonies, perhaps, to various parts of the country, and as soon as I discovered the presence of this disease in the State, I published an article in a San Francisco agricultural paper, warning my customers of what had transpired, and warning them to beware of these diseased bees, for it would prove disastrous to their interests. I did so to protect my customers, for I took pride in having men say, "You treated me fairly, and my purchases have been a success;" and I have met commendations.

The result was a paper controversy between Mr. Wheaton and myself, and some others joined in. They claimed I had no right to make public the fact of the presence of the disease. They did not deny that it was present, but claimed I had no right to injure their enterprise. I claimed I had a right. Mr. Wheaton finally brought his bees down to Los Angeles, and to him you are indebted for the trouble you have, and always will have with you. For you will never succeed in obliterating it, from the fact that the bees are in the rocks, in cavities, and every place else where the disease can be rooted. So you can only succeed in keeping it down as well as you can, only palliate what you can not cure.

I do not know that I can say anything more that will interest you. I do not know that what I have said gives you any interest, but I hope it is instructive, if nothing else.

Question—Mr. Harbison, did you have any friction with fruit-growers?

Mr. Harbison—They have made some complaints. I never got into any lawsuits on the question.

Question—An apiary belonging to one Steele Cannon, coming from Upper Sweet Water, with about 100 hives, I think, was burned. Can you tell us anything about that?

Mr. Harbison—I know of a number of apiaries burned. There were none of mine burned, however. There were some, probably, due to fruit-men starting the fire. I know there were threats made that apiaries would be burned, in case they were not moved. There were some people who moved their apiaries away, and gave them up. They never molested me. In one case where they complained, I went to the trouble of fixing the hives so they could be shut up during the day, but on visiting the vineyards about the same number of bees were found there as when they were not shut up, because bees are in the rocks and trees, and wherever they can get a cavity to locate in. That can not be cured, and hence they will have to endure it. Whatever damage they may do to the raisins it is not so great as is generally imputed to them. Squirrels, and all that kind of thing, destroy more grapes and raisins than ever the bees do, or can do; but the fruit-men do not pay so much attention, and do not seem to care for them, because they are not supposed to be owned by anybody.

There is one more practice to which I should like to call your attention along the lines I have been experimenting on, and that is the matter of bee-pasture. I have demonstrated for myself, and those who care to investigate will discover, that very much can be done to improve the bee-ranges. The black sage that is found abundantly on the coast, in many places, does not grow in the mountains, or, if so, in very few locations. I gather the seed of it, and have planted a good deal of it on my ranch. I have, perhaps, 100 acres or so that is well kept, and it is adding to the value of my apiary, because it affords bloom when we have somewhat of a scarcity of other flowers, and we have a great deal of land there that I see no use that it could be put to that would be profitable for many years to come, at least, and I do not think there is anything that will pay better than producing bee-pasture.

There is a shrub that is found very extensively there on the mountain regions of California, that is worthless as bee-food. The bees gather some pollen from it, but no honey. The soil is good, and if you uproot the grass and weeds, the black sage and white sage take very freely. It is good land, suitable for these plants. You will have to confine yourself in improving your bee-ranges to the planting of our native shrubs. I know of no foreign honey-producing shrubs that will stand our dry season equal to our native plants. The eucalyptus family will be of great value. It is a fine tree to grow, and resists drouth well, and will bloom at the time when our main dependence is gone. While eucalypti do not yield so much honey as our native plants, still the bees will increase, and it will subsist your bees so that you can take off all the fine quality of honey, and you can depend upon the eucalyptus to carry your bees over the year.

Question—May I ask if you plow or cultivate the land where you sow the seed?

Mr. Harbison—It would be better to do so, but black sage does best where you have a plant over six feet square, better than if sown too close. When sown broadcast, it usually comes up too thick, and, while it produces well, it does not produce as well as those clusters where they cover a piece of ground two yards in diameter or more—a great, big mass of black sage—as you who are familiar with it know.

Question—Does black sage produce a water-white honey?

Mr. Harbison—Yes, there are three varieties of it here in these southern California counties. There is black and white sage. Up in Eldorado and Placer counties, where I kept bees and experimented, there is what might be termed "creeping sage." It grows on the ground, and runs, and I have seen a single plant cover more than a rod in every way, and shoots up bloom-stalks a foot or 18 inches. The bloom is almost identical with the garden sage, and I have seen as many as 25 bees working on an equivalent of a square foot. The honey is as white as your whitest, and has an aroma a little superior to these southern California plants.

Dr. Miller—Is that sometimes called the purple sage?

Mr. Harbison—I never heard it called that. I think the purple sage has a blue flower. What we term "black" is of a dark-green color in its foliage; the white is of a white color in its foliage. I discovered a plant on my place a perfect cross between the white and the black, that gives great promise of being an improvement on both of them. I saved some of the seed, intending to experiment and see whether I can produce all the varieties.

Question—Do you think the creeping sage would succeed in the Southern Counties?

Mr. Harbison—I have no doubt it would in some of the higher mountains. I have some growing, and while it is a partial success, I have not experimented in growing it in a number of places, but I think I could locate it in places more adapted to it than places where I have it, so I don't think it would be as profitable as our white and black sages would be for propagation.

To go back to the eucalyptus. What we call the red-gum is in bloom, and has been, for a couple of weeks. The bees work on it very largely to produce honey wholly. I think I have never seen the bees work on it gathering pollen. It comes along in sections, and will be in bloom for probably six or eight weeks, commencing early in August and running on into September. Then comes the blue-gum eucalyptus, which is the most rapid grower of the eucalyptus family, and that grows very rapidly. Some will be in bloom in October, and then others again along in September; another variety of trees will be in bloom along in March and April; then there is the Robustia that commences to bloom in January, February and March, and the red-flower gum that blooms at the same time. That is a very picturesque, fine tree. There are but few of them, I am sorry to say, growing in that country.

The planting of the eucalyptus would be a valuable investment as a fuel-producer, to say nothing of its value to bee-keepers. Groves of eucalypti would grow into money very rapidly. I had a few trees planted on my Sweet Water place 20 to 22 years ago, and some are now at least 100 feet high, and would make a cord or more of stovewood to the tree. I have not triangled them, but they are said to be 100 to 120 feet high.

(Continued next week.)

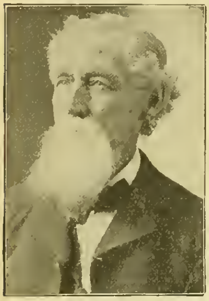
Why Not Help a Little—both your neighbor bee-keepers and the old American Bee Journal—by sending to us the names and addresses of such as you may know do not now get this journal? We will be glad to send them sample copies, so that they may become acquainted with the paper, and subscribe for it, thus putting themselves in the line of success with bees. Perhaps you can get them to subscribe, send in their dollars, and secure for your trouble some of the premiums we are constantly offering as rewards for such effort.

Contributed Articles

How to Use a "Bingham" Honey-Knife.

BY T. F. BINGHAM.

I HAVE regarded this invention as a scientific discovery. The knife does what it does because so little of it rests in the honey to be uncapped. The honey is fixed, and comparatively rigid, yet plastic. Were the knife to lie flat in the honey the atmospheric pressure would be approximately 195 pounds upon its upper surface. The adhesiveness of the honey does not readily admit the air to the underside from any usual cause, hence to move it is to move at least a part of 195 pounds pressure. No one will fail to see that by turning the knife in such a way as to allow a part, or all, of the 195 pounds atmospheric pressure to pass under it, it would not stick. I think the above explains why the ¼-inch bevel resting on the uncapped honey does not tear the cells—the only fixed matter in contact with it. The caps, as cut off, are movable, and do not hinder the free movement of the knife. The knife, as constructed, is simply less than ¼ of an inch wide, merely a sharp edge which moves readily over the honey and beneath the caps; the other 1¼-inch blade is merely an apron to keep the caps from falling back upon the uncapped honey.

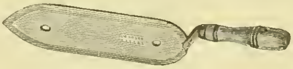


T. F. BINGHAM.

It will be readily seen that the bevel is the knife, and that this bevel depends upon the thickness of that part just back of the edge. That is why the knives are so thick. They should always be sharpened on the beveled side. I have been using to-day the first knife of the kind ever made. (It cost me $2.00 in the edge-tool factory where all my knives are made). It is a perfect tool, and while a little wider than now made it can not be improved. A pound of steel makes about three blades.

I have often seen accounts of how to use an uncapping-knife, and while I don't know how they should be used, I will state briefly how I use mine.

I have a pail (wooden) so as not to dull the knife, or a shallow pan, filled with ordinarily cool water, into which I drop the knife whenever time will permit. The water removes the honey from the sharp edge, and is a great aid in starting the knife under the caps. It is at the starting point that the trouble begins. If it gets a clean start all goes well. Never use hot water; the wax will stick to the knife, and, when it does, the knife might as well be iron as steel, as the edge will be thick with wax and will not cut—merely melt its way through the combs.



BINGHAM HONEY-KNIFE.

(Showing lower side with beveled edges.)

On this water question, I would just say that soap and cold water will remove bee-glue from your hands better than hot water; and if water and soap won't do it, a tablespoonful of clear alcohol will soften the wax, after which soap and water will do the rest.

Some might suppose that the water would rust and spoil the knife, but honey-sweetened water does not. It may lie in such water days without injury.

We are having great rains. Early honey was abundant and fine. Nothing but bees after July 5. I have just doubled up my colonies, and they have enough honey for winter. I put 150 colonies into 75 to do it, and they are not short of bees or honey. It gave me a nice opportunity to weed out the hybrid queens, as 75 had to be removed. It took me from 5 to 7 hours per day, for 3 days, and not a single comb separately was changed in any of the hives. This feat could not have been performed in any other apiary in the United States or Canada, perhaps in the world.

Clare Co., Mich., Oct. 17.

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Bee-Keeping on a Poultry Farm.

BY VICTOR D. CANEDAY.

As I have been asked to contribute a paper for this meeting, I will endeavor to give an outline of my experience in bee-keeping, and state why we chose to keep bees in connection with the breeding and rearing of our thoroughbred poultry.

About the middle of December, 1899, we bought 3 colonies of bees for $6.00, the low price inducing us at that time to begin bee-keeping. We wintered them in our house-cellar, and the following summer, although a very poor year, and many around us had scarcely a swarm and no surplus honey, the 3 colonies increased to 7, and gave us 40 pounds of surplus honey.

During the season of 1901, the 7 colonies gave us nearly 800 pounds of surplus honey, and increased to 15 colonies. Our best colony that year gave us 105 pounds of surplus from the first swarm, and 65 pounds from the old colony itself, making a total yield of 170 pounds of comb honey. We sold 5 colonies, and began with 10 last spring, which increased to 18, and of that number we had 14 left, the others having been sold. The honey yield with us, this year, was only about half what it was in 1901, the 10 colonies of last spring's count giving us a yield of only about 600 pounds of surplus. So far, we have not lost a colony in any way, with the exception of two swarms which left for the woods without proper warning.

With the success we have had from the outset, you will not be surprised that we are quite favorably impressed with bee-keeping as an adjunct to poultry-raising and fruit-growing.

Perhaps the one thing which most strongly influences people to engage in bee-keeping is their liking for honey, and with us the supply of honey for our own table was the first consideration.

Bee-keeping is particularly adapted as an adjunct to poultry-farming, owing to the fact that the heaviest part of the work among the bees comes at a time when the poultry work is comparatively light. On most practical poultry farms the hatching season closes with May, and the work during the remainder of the season is comparatively light, while the work with the bees is most exacting from the last of May, through June and July. If the poultry-keeper chooses to bend most of his energies to obtaining fall and winter eggs, which are the most productive of profit, he is free to give them his entire attention, as the bees require but very little of his time at these seasons.

The labor of both bee-keeping and poultry-raising is comparatively light work, and to one not overly strong, and who feels the need of an open-air life, there are few occupations which are more attractive and fascinating, and certainly few which require so little capital to be invested, and yet are capable of furnishing one with a good living, if not something besides.

In keeping either bees or poultry, it is essential that one apply themselves closely to the work; although not heavy nor particularly taxing on one's strength, they require constant and systematic attention to insure best results.

Perhaps one very much disinclined to stay at home closely would not find them congenial employment, owing to this particular feature. This, however, would prove no objection to home life and rural surroundings. In fact, such would find it rather a pleasure to stay at home and give these interests the care and attention they require.

Our farm consists of only ten acres, and is devoted to the breeding and raising of pure-bred, white Plymouth Rocks for breeding purposes. Our busiest times are doing the fall and winter, with the selling and shipping of breeding fowls, and during the spring with the sales and shipments of eggs for hatching purposes. Thus, you will see our work with bees comes at a time when other work is not so pressing. We have quite an orchard of plum trees well started on the farm, to furnish shade for the chickens and incidentally fruit for our table, and for sale.

Bee-keeping has been taken up as a side-line, and has been found to interefere very little with our regular poultry-work. The chickens are allowed to run among the hives, to the mutal benefit, we believe, of both bees and chickens. From the fact that the poultry frequent the neighborhood of the bee-hives so much, and we seem to have so little trouble from the bee-moth, we judge they catch many of the millers, and I am quite sure they catch a great many drones, although manifesting a wholesome fear of the workers.

In many ways poultry and bees seem to be adapted to occupying the same ground.

The combination of poultry, fruit and bees seems to be a unique one, each contributing to the well-being of the other. Shade is one of the essentials on a poultry-farm, and nothing furnishes any more desirable shade for poultry than an orchard of plum orapple trees, while either makes a most desirable location for the apiary, especially a plum orchard.' The trees being of low growth, prevent swarms clustering too far out of reach. In case of its being necessary to remove the branch on which the swarm clusters, plum trees are much less liable to injury from the unseasonable pruning.

It is generally known that fowls are of no small benefit to the fruit-trees, not only by consuming many insect enemies of the fruit, but by increasing the fertility of the soil over which they run.

Fruit-growers generally, I believe, recognize the value of bees for fertilizing the fruit-blossoms and increasing their chances of liberal yields of fruit, so it will be readily conceded that the production of honey, fruit and poultry products can be profitably and economically combined.

We would not care to engage in the culture of small fruits and bee-keeping together, especially the raising of strawberries, for the heaviest work of picking and marketing the strawberry crop comes just in the height of the swarming season, and both require prompt attention to be handled profitably.

Perhaps in the majority of cases where bee-keeping is carried on in connection with other pursuits, it would be found most convenient to run for extracted honey. One of the chief difficulties with us has been the tendency to excessive swarming when run for comb honey, and by working for extracted honey this tendency seems to be materially lessened; I believe this the experience of bee-keepers generally.

We had one colony, the past summer, which did not swarm at all, and otherwise than the presence of considerable drone-comb in the hive, we could not see anything to prevent them swarming. It was one of our best Italian colonies, and was used to supply breeding drones for our apiary. Other colonies swarmed more than usual, although the season has been unusually cool, but they were practically without any drone-comb.

By the use of modern hives and appliances, bee-keeping can most certainly be made a source of pleasure and profit on a poultry farm.—Read at the Minnesota State Convention.

Chisago Co., Minn.

The Value of Sweet Clover.

While there are many who unqualifiedly condemn sweet clover (melilotus alba), also known as Bokhara clover, as a noxious weed that is not to be tolerated under any circumstances, there are others who claim for it some good points. Without doubt the conditions have much to do with the attitude of the observers. It is a very rapid and vigorous grower, produces an enormous quantity of seed, and is in other ways fitted to thrive under adverse circumstances. For these reasons it is quite persistent in remaining where it is not wanted when once it has maintained a foothold. This feature is, however, a strong point in its favor under certain conditions. It enables this plant to thrive where it is impossible to supply the conditions of soil and treatment necessary to the successful growing of other crops. As its name indicates, it is a legume, and like the other members of that family, it is a great improver of the soil. Prof. Duggar, of Alabama, says:

Fields that for two years have borne sweet clover have been known to produce the next year nearly twice as much corn as before being sown to this leguminous plant. At the Ohio Experiment Station, a number of years ago, a notable increase in the yield of wheat was obtained through the use of this plant as a green manure. The cane-brake Experiment Station at Uniontown, Ala., has demonstrated not only the power of this plant to add nitrogen and vegetable matter, but also to assist in the drainage of the heavy calcareous clay soils of that part of the State, through the channels made when the large roots decay.

It should not be grown as a crop on soils where the other more common legumes will thrive; for while this plant is very easily grown, and an enormous yielder, it is not relished by stock either as pasture or hay. It is nutritious when properly handled, and stock will do fairly well on it when they can get no other roughage, and become accustomed to it.

Courtesy Prairie Farmer.

SWEET CLOVER IN POSSESSION.

Its value as a honey-plant is quite generally recognized. Its chief redeeming feature, however, is its ability to flourish on soils that are in their present state almost barren. Where it once gets a start it will crowd out almost any other kind of vegetation.

The accompanying illustration represents a spot in a large area of idle land where the native grasses and weeds have been almost exterminated by the encroachment of sweet clover. Two fence-posts of ordinary height are in the center of this view, but are hidden by the clover, which will give an idea of its height. In the foreground is a patch of young clover just coming from the seed that ripened and shattered off last year.—Prairie Farmer.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Cell-Cutting to Control Swarming.

I wonder if Mr. Hasty is "meekly ready to be informed and corrected by the" woman, as well as the *man*, "who has run 50 colonies through the season that way." Page 665.

I have run more than 50 colonies through more than one season that way. Yes, it is a good bit of work, and not always pleasant, *but* it gives the honey.

A Sister's Impressions of the Los Angeles Convention.

Mrs. A. L. Amos, who was perhaps the sole representative of Nebraska bee-keepers at the Los Angeles convention, writes:

"I find that while I was holiday-making my bees were not. I have not yet removed all of the honey crop, but enough to make sure that I have every reason to be satisfied. Nebraska is not California, but to me it is literally 'a land flowing with milk and honey.'

"Being only a little fish rather than a whale among the bee-keepers, I don't often indulge in a convention, and had not attended one since Lincoln, which I surely enjoyed much more than I did this last."

In a letter to the Custer Co., Beacon, Mrs. Amos gives her impressions of the Los Angeles convention, and among other things says:

"Certainly, it seemed to me, that there was more wrath than was desirable—in fact, the quibbling over trifles was not altogether creditable to the intelligence and forbearance of the craft, and suggested the idea that some of the irascibility of the Cyprian or the black bees, and the hybrids, with which some of the veterans are familiar, had, in some subtle way, communicated itself to them."

But, with the spirit of a philosopher, she concludes with the following wise words:

"Those of us who went to the convention, imbued with that spirit which carries 'malice toward none and charity for all,' and a mind receptive to learn, will forget anything that might better be forgotten, and treasure only the wisdom of experience which was freely given; and will trust that 'the spirit that heals differences,' may descend upon some of the excited brethren, and bring them peace."

Mrs. L. Harrison Afflicted.

I shall go to the hospital next Monday, to have an operation upon my eyes for cataract. I hope you will be able to read what I have written in dim light, the last I will be able to write for some time. My very busy life of three score and ten years are telling upon me.

Peoria Co., Ill., Oct. 22. MRS. L. HARRISON.

I am sure that Mrs. Harrison has the hearty sympathy of *all* the sisters in her affliction. We shall all be anxiously watching for the outcome, and earnestly hope that it may be successful.

Mrs. Harrison has been so long and favorably known among the bee-keepers that she may well be styled one of the veterans.

Wants to Begin Bee-Keeping.

I have no bees yet, but I take the American Bee Journal in club with the Nebraska Farmer. One of my friends has some bees—Mrs. Hutflus—and she is going to send for an outfit. She does not know much about bees. I would like to go into the bee-business. I have a 40-acre farm, and I think she will let me have some; then I will tell you how we get along. I have plenty of flowers, catnip and clover. The trees are very large, and have plenty of fruit. I have had my homestead 23 years. I live alone, and have to work so hard. I have a good garden that I made myself. I do not think I can do so much work any more, but will have a different way for the future. I will have some bees if I can, and if the farmers do not attend to the crops they will have to leave them. RACHEL HUNTER.

Pierce Co., Nebr., July 24.

Here is a woman that is up to date. She takes the Bee Journal before she has any bees. That is a good deal better than getting your bees a good while before you get the Journal.

Have Your Bees Ready for Winter.

Are you sure that your bees have plenty of stores for the long winter? Not just enough, remember, but abundant stores. No harm to give them too much—they won't waste it.

Do you winter your bees out-of-doors? Then see to it that they are snugly packed for their long winter nap before it is too late.

If you winter them in the cellar, get your bees all ready to pick up and carry in whenever the weather gets cold enough. Don't put these things off until the last possible minute, for in that case they are apt to be done hurriedly, and so not very well done.

These delightful October days are likely to fool us into believing that there is plenty of time, but snapping cold weather may come with a jerk, and catch us napping.

The Premiums offered this week are well worth working for. Look at them.

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo. Ohio.

GETTING BOTH HONEY AND INCREASE.

To get both honey and increase in one season choose an exceptionally swarmy season (like the last), goad them on and see them get to swarming feverishly; then catch as catch can for all the honey you can get. J. E. Johnson's plan, page 600, doesn't differ very widely from this. But he went it "powerful strong," it must be confessed. Fifty colonies from 12, with 1400 pounds sure, and 1000 more heaving in sight, and the back county of Smartweed still to hear from—well, we don't blame him for bragging.

"All queens seem to be prolific in a good season." How's that for good aphorism to Mr. Johnson's credit?

There's another kind of season that favors both honey and increase—not quite surplus at all till very late, and then a good flow. Four colonies made out of one may, in such conditions, be expected to give more surplus than one would have done. Alack, comrade J., we are both teaching the children to play with fire! The safe road to surplus is to repress increase and keep all colonies as strong as possible. Not possible for us to know about the season's peculiarities before they arrive.

SWARMS CLUSTERING OVER NIGHT.

I think Dr. Miller is right, on page 602. In good weather, if a swarm stays in a cluster longer than over night, it is with the intention to stay permanently. But, being nearly all women-folk, they may change their minds. We are not to be particularly astonished, therefore, if some one should report a cluster hanging four or five days, and then flying to parts unknown, in the usual style.

A "GRANDMOTHER SISTER"—BEE-PROTECTION.

To say that our grandmother (or pronounce it grand—mother) is a Sister, hardly sounds right. Apiculture for 33 years seems to entitle Mrs. Harrison to some other title. Her style of bee-protection is somewhat unusual. I should call it a good style—only some of the younger sisters might whisper, "How do I look?"

I'm inclined to think it has not often been in print that bees take stiffly starched linen as a board or something, and don't try to sting through it. Guess that's perfectly correct. I can imagine that valuable use might be made of the fact sometimes. Page 603.

IS IT A SURE THING IN TEXAS?

Mr. O. P. Hyde, of Texas, is putting it pretty strong when he says:

"Gentlemen, the bee-man never has a failure, never knows any want."

I thought at first it was comicalities he was at, but he seems to be in earnest. Page 615.

THE QUEEN-BEE AND OTHER BEES.

Mr. Arthur C. Miller—after we have sufficiently rubbed him down with cobs and sharp curry-combs, we shall probably in the end come to thank him. Probably nearly all of us were crediting the bee's ligula with much more service than it actually performed; and it is desirable, very desirable, that the bee should stand right in our minds. Still, as for me, I am in no haste to say that the bee *never* does—well, anything it can do. Barely possible, perhaps, that by some queer arrangement it may be impossible to disgorge through the ligula.

He seems rather too anxious to reduce the queen to the ranks—don't appear to have the "judicial turn of mind" toward her—but no ultimate harm is likely to come of letting him trot out his theory of the queen's actions, and his theory of the actions of the workers toward her. Only he must not let his dander rise if we should say: "This is theory, brother, and we also have our theory." So, whenever the queen is fed something better than honey, the bees turn to like little boys and flourish a "Gimme some!" It's a valuable observation that the queen is seen to ask bee after bee and get nothing; also, that a delay or parley of some sort precedes actual feeding sometimes. Others must verify until we know how general these things are. If bees never offer a queen anything, a caged queen would seem to be in dire straits. It is generally understood that whole apiaries are run for ten days or so with queens caged, to be fed by their own bees. I never did this, and don't, at this moment, know whether it is necessary to put food in the cages or not.

It's interesting to see that even during very rapid laying the queen takes rests of ten minutes or so. Guess the eggs are in strings (so to speak) and when one sting is ended the next may not be quite ready. But, then, we don't urgently need any theory other than the usual weariness and rest to account for this. Evenly told off through the day, 2000 eggs would be one each 46 seconds. Page 616.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Storing Drawn-Out Combs.

Where shall I store drawn-out foundation combs to keep from getting moldy during the winter? MINNESOTA.

ANSWER.—Anywhere except in a damp, moldy cellar.

Two-Piece Bottom-Bars—Bee-Quilt—White Clover.

1. Where can I get frames with the two-piece bottom-bars?
2. How much more do they cost than the regular Hoffman frames?
3. Could the regular Hoffman frames be made that way?
4. What do you use over the frames for winter covering besides the cover?
5. Give a good description of a bee-quilt.
6. I have some honey that I call white clover, but in the place of being clear white it is a kind of yellowish color, some cappings being white while others beside them have a yellowish appearance. What is the cause?

I have 34 colonies of bees. I had about a third of a crop this year, the weather being too wet and cold. WISCONSIN.

ANSWERS.—1. You can get them from the G. B. Lewis Co., by ordering Miller frames, and probably elsewhere.
2. I don't remember, but there's very little difference.
3. If you mean with a two-piece bottom-bar, I think they might.
4. Nothing whatever. They are taken into the cellar just as they stood on the summer stands.
5. I haven't seen anything of the kind for a number of years except in an apiary in California, and there a simple sheet of heavy material like denim or duck was laid over the frames. The last thing of the kind I used was a double layer of heavy sheeting with several layers of newspapers between.
6. Hard to tell without seeing it. I suspect you left it on pretty late and the bees gave it a slight varnishing with propolis.

Wintering Bees.

As we are just starting in the bee-business, we would like to ask a few questions in regard to wintering bees.

1. We bought 4 colonies of Italians about 2 weeks ago (Oct. 1), and have had no experience heretofore, excepting what information we got by reading the "A B C of Bee-Culture," edition of 1887. Do you think it is too old for modern bee-keeping?
2. Two of the colonies have about 15 pounds of honey in the supers in sections. Would you advise taking this out?
3. If so, would it be best to remove the super or leave it on? If left on, would it be a good plan to fill same with shavings, or something like that?
4. Also, one hive has no cover, and there was a board laid on with a cloth or quilt, and the honey is stuck fast to it. As it is long and wide, and very unhandy, would you advise taking it off? If so, how? I do not think there is much honey below in it, as the hive is very light.
5. As we have no good cellar to put them in, would you advise building a shelter, or leave them out in the opening as in summer?
6. What kind of cloth or quilt do you recommend? and can they be bought of dealers in bee-supplies? IOWA.

ANSWERS.—1. Of course, there is constant progress being made in bee-keeping, but if you keep up with the teachings of 1887, you will be doing very well.
2. Supers are supposed to be taken off long before winter.
3. Either way. If left on by all means use planer-shavings or other packing.
4. I'm afraid if you meddle you may make bad work. The bees have probably settled their winter quarters up against that board, and you better leave them as they are till spring. If the board is too much in the way by its length, saw it off.
5. Better give some kind of shelter, if it be only to pile corn-stalks about them.
6. Enameled cloth may be used, or heavy sheeting, such as you will find at any store. But, nowadays, many use flat covers without any sheets or quilts. If you pack shavings in the super over the hive for wintering, you must have something under the shavings. Burlap, or almost any kind of cloth, will do.

A Kind of Fly—Bees Fighting—Uniting Colonies.

1. I am a beginner in bee-keeping. I caught a fly or a bee, I don't know what to call the critter, so I send it to you alive in a tin box. I saw a couple of them enter one of my hives. I don't know what they are; I saw them several times during the warmest part of the day. What is it, a fly or a drone? Name it, and give its habits.
2. I opened a hive the first part of September, and set the frames in another hive-body and looked for the queen. I spent about half an hour, but could not find the queen; I wanted to kill her, as she was a hybrid. The bees filled themselves with honey, and when I put the frames back nearly all the bees went back, then some went fighting among themselves, and would take a bee that was rather late in getting back and would make her give up all the honey she had, then they would sting her to death, or bite her so she would die in a few minutes. They killed about a half pint of bees in this way. Bees from other hives did not fly on that morning, as it was a little cool, so it was their own bees they killed. Why did they kill their own bees in this way?
3. Is a Langstroth frame the same dimensions as the Hoffman frame? If it is not, what are the dimensions of the Langstroth frame?
4. If 2 colonies are united now (Oct. 15), will they fight very much if smoked some before setting one brood-body on another? MICHIGAN.

ANSWERS.—1. The insect is a kind of fly that is not very uncommon, but I'm not entomologist enough to give its name and habits.
2. I wonder if there can be no mistake about there being bees from other hives. If it were their own sisters they were killing, I can't give the reason why.
3. The same, 17⅝x9⅛.
4. Possibly; put a paper between the hives with a hole big enough for one bee to pass at a time, and they will gnaw the paper away, gradually uniting.

Winter Stores in Super.

I have some light colonies. I gave them supers with unfinished sections. Will they winter well if I leave them on for winter? I have a good bee-cellar. I would like to leave them on. The bees do not take the honey below. WISCONSIN.

ANSWER.—Yes, it will be all right so far as the bees are concerned, but it will be rather rough on the sections.

Managing Out-Apiaries—Swarming.

1. I have run an apiary of 100 colonies for the last 10 years, along with a farm, but I am thinking of giving up my farm to my son, and if I do I would start an out-yard. Could I manage the out-yard myself?
2. How would it do to put queen-excluding guards on the entrance in swarming-time, and keep all the queen-cells cut? Would that work in the out-yard? or would it be better to remove all the brood to an upper story with the queen on starters below, with a queen-excluding board between the two?

I have been a reader of the American Bee Journal for a number of years, and owe all my success to it. May it live long, and die happy. ONTARIO.

ANSWERS.—1. You could manage the two yards yourself if you don't have too many bees in them, and your plan of management does not require too much work. The problem will be easier if you run for extracted than if you run for comb honey.
2. The guards will do if you follow up the right management afterward, but simply putting on guards and cutting out queen-cells will not be sufficient. The second plan you mention will work well for extracted, but not for comb honey. You have no doubt seen much lately about shaken swarms, and they might answer your purpose.

Report for the Season—Wintering Bees in a House.

I started with 6 colonies last spring, and increased to 21 by capturing 3 stray swarms. I got 1824 pounds of comb honey, almost all in 1-pound sections.

I read the American Bee Journal and "Forty Years Among the Bees."

I make my own hives; I think they are what are called the Wisconsin portico hives, with 8-frames. I have weighed them to see if they had plenty of stores for winter. They weigh from 60 to 75 pounds each.

I have no cellar fit to winter bees in, so I will have to winter them out-of-doors, or in a house I built for chickens. The house is 10x18 feet and 7 feet high, with a good shingled roof, and boarded tight with good pine boards. The side of the house is toward the south. I thought of making an opening along the bottom large enough so the portico of the hive would fit it, and set the hives on the inside, leaving the entrance to the outside of the building facing south. What I want to know is:

1. Would the house be any advantage over wintering on the summer stands?
2. Would it do to set the hivesclose up against each other, side by side?
3. Would it do to put two rows of hives, one above the other?
4. Would there be danger of the bees getting into the wrong hive when flying out on warm days?
5. Would it be advisable to pack the hives with straw inside the building?
6. If I put the bees in the house should I do so before, or wait until freezing weather?
7. Don't you think my bees did pretty well? NEBRASKA.

ANSWERS.—1. Yes, indeed; with the understanding that the bees are just as free to fly out as if the hives stood on their summer stands.

2. Yes.

3. Yes.

4. Yes, to some extent; but no great harm would come of it.

5 Yes, if the building was somewhat open; if very close it would make little difference.

6. A little better to put them in before severe weather.

7. Very well, indeed; but don't expect them to average as well when the number of colonies runs up to 50 or more.

(Don't send a stamp when you send questions; if any one gets them the Editor ought to have them; but he's not going to get this one.)

◆

Nuclei and their Management.

What are nuclei? and how should they be taken care of? INDIANA.

ANSWER.—There is the same difference between a nucleus and a full colony that there is between a boy and a man. Usually a nucleus has not more than three frames covered with bees. To tell all that can be said about the care of nuclei would go beyond the limits of this department. A bee-book telling about this, and many other things. would be of great service to you.

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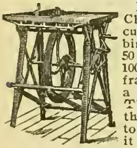

Read what J. I. PARENT, of Charlton, N. Y., says: "We cut with one of your Combined Machines, last winter, 50 chaff hives with 7-in. cap, 100 honey racks, 500 brood-frames, 2,000 honey boxes, and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make, and we expect to do it with this Saw. It will do all you say it will." Catalog and price-list free.

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Tells all about Bees in California. The yields and Price of Honey; the Pasturage and Nectar-Producing Plants; the Bee-Ranches and how they are conducted. In fact the entire field is fully covered by an expert bee-man. Besides this the paper also tells you all about California Agriculture and Horticulture. $1.00 per year; 6 months, 50 cents. Sample copies, 10 cents.

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Beedom Boiled Down

Growing Catnip for Bees.

I have experimented a good deal with catnip. Besides sowing in waste places [in Knox Co., Ill.,] I sowed one acre last fall. I find that it does best in very rich soil; in fact, in poor soil it did nothing. Where there is waste land containing leaf-mold, old brush-piles, or any decaying logs or wood, I believe catnip ahead of anything as a honey-plant; but for poor or only medium-rich soil I think sweet clover is far ahead of anything I have tried.—J. E. JOHNSON, in the American Bee-Keeper.

Purifying Extracted Honey.

This is a subject discussed in a symposium in the Australasian Bee-Keeper. In the leading article it is strongly advised to use artificial heat. The writer, James Lockett, says:

I say it can't be ripened satisfactorily by the natural heat alone. To purify by artificial heat we must get all our honey-tanks built with a compartment in the bottom of them to hold water, and have our steam-pipe going into it, also a short pipe going out of it with a valve attached, so if we over-heat or put the steam pressure on too strong, our escape pipe will soon let us know that we have too much pressure on.

Now, we want steam, and a good pressure with it. The right way is a small boiler, rather expensive for most bee-keepers, but the first cost is the only cost, and you have an article that will do its work properly and will last you a lifetime; and more, when you have your little boiler how handy it will be at the end of the season to clean out extractor, uncapping-can, honey-tanks, and any tins that need cleaning. I guess every time your little boiler is steamed up during the honey season you will be at work with the hose with a tap at the end where you are working so you can turn on or turn off steam when wanted, and when you do a half hour's work in about five minutes with the steam-pipe you will say, "Ah, can't beat the steam, boys."

Then, again, when you have a good flow of honey coming in, and you are extracting at the rate of one ton a day or more, and you will wind up with all

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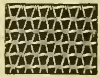

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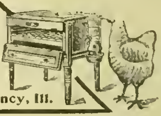

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Reduced Prices.

☞ Good for the balance of this season only.

As I desire to unite my nuclei as soon as possible, I will sell Queens at the following low prices, until my present supply is exhausted.

Untested Queens, 60c each; 6 or more, 50c each. Select Untested, 75c each; 6 or more, 60c each. Tested, $1.00 each. Select tested, $1 50.

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If all of the Sections we sold last season were placed unfolded, in a straight line, the line would reach over Three Thousand Five Hundred Miles.

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RUBE'S SURPRISE.

Well, I'll Be Bumped!

I don't see what I have been thinking of all summer. Here I could gest as well sent to Griggs Bros. for my Supplies and saved all this freight I've been throwing away and got my goods cheaper, too. Don't see why I didn't send them a trial order sooner and find out what I was doin', long as they sell Root's Goods at their factory prices, gest as they said.

A Word to the Wise is Sufficient.

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the world's record, a powerful runaway auto, at Zanesville, O., fair, ran into Page Fence and was stopped after killing or injuring over twenty persons.
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your tanks full and a snap of cold weather backing you up, what will follow? You will come along the fourth or fifth day and have a look at your tanks and find little or no scum on them. Why? The honey is too cold and thick to let the air-bubbles rise. Then you will come along again in about nine or ten days, and say, "Well, I must can up some of this honey to make room for more." What is the result? Some of your honey goes to market not properly ripened, carrying a scum on the top of it.

If we have an artificial system of purifying our honey similar to the above, we would avoid our honey going to market below standard, and it would only take a short time to heat your honey up to a certain temperature, independent of the weather.

In the same paper, Geo. Fackender says:

When honey is kept at a temperature from 122 degrees to 130 degrees F. for several hours, all impurities, everything foreign to pure honey, will come to the surface, which can easily be skimmed off, and its good qualities retained and a clear, inviting appearance imparted. When the honey is purified it can easily be syphoned off into a lower tank to be packed for market.

The smaller bee-keeper—he who thinks the foregoing method too expensive, but at the same time wishes to obtain the highest prices for his honey—should utilize the heat of the sun to gain his end. He should place a shallow tank in a room with a low, flat roof, the tank to be connected with the extrator to get its supply of honey. It should have a cap on top, painted black, likewise the walls, to draw the heat. The roof should be constructed so that part of it could be removed easily to admit the rays of the sun. The sun striking the black surface of the tank for several days in the heat of summer, will soon bring all impurities to the top, which can easily be skimmed off. Such arrangement would be inexpensive and practicable, and honey thus treated will soon cast up all impurities, give off surplus moisture, present a clear appearance, and retard granulation.

FROM MANY FIELDS

A Good Year for this Canadian.

This has been a good year for us. Bees were not in good shape in May, but white clover came in bloom earlier than ever before, and is still blooming, though ,of course, not yielding honey. I have increased to 205 colonies, and expect to make that 300, at least, next season. This year my average was about 120 pounds per colony, mostly extracted honey. MORLEY PETTIT.
Ontario, Canada, Oct. 20.

Prevention of Swarming.

We keep the bees in 8 frame portico hives of a pattern similar to the Langstroth, but with middle bars in the frames, and a plain front hive, similar to the Simplicity hive; I like the portico pattern much better for handling and hiving, and can put 28 of the regular 4¼x4¼ sections on them at a time.

This year I found No. 2 was weak in bees, while No. 3 was very strong, so just before swarming began I placed No. 3 where No. 2 had stood, and No. 2 in the space left vacant by moving No. 3. Neither of them swarmed, although both were fairly strong. I think I lost 25 pounds of honey by the operation, for neither was strong enough to gather much surplus in the short flow that we had. HOWARD H. HOUSE.

Oneida Co., N. Y., Oct. 23.

A Utah Report.

I took 620 gallons of extracted honey from 30 colonies, and increased, by dividing, to 45 colonies. No swarms. How is that? B. F. BARRUS.

Tooele Co., Utah, Oct. 17.

Good Wintering Advice.

I wish to call the atttention of bee-keepers to the fact that we should have more of our winter loss the previous autumn. Don't try to carry every colony through the winter that has a few bees in it. Remember that it is nearly always an indictment against a queen to find her always the mother of a weak colony. Don't let such colonies use up a lot of valuable stores, and then die, but weed out such and double up, saving the best queens, then feed in a way that will stimulate late breeding, and thus go into winter with bees whose life is before them instead of behind them. Have a standard of excellence that bees must come up to Nov. 1st, and make them do it, and then we will have less winter loss and more honey for stimulative feeding the next spring.

Remember, there is many a slip 'twixt the queen-cell and a car-load of honey. Number of bees in the hives instead of colonies in the apiary, is a good motto.

I would like to have been there and made one more of that car-load of bee-keepers, but I had to load two cars of honey during that 10 days, so I could not go. M. A. GILL.

Boulder Co., Colo., Oct. 24.

A Very Poor Year.

This has been a very poor year for bees in this part of Vermont. But we are not going to give up the American Bee Journal, just the same.

A. W. DARBY.

Grand Isle Co., Vt., Oct. 24.

Has a Home Demand for Honey.

This has been a poor year for bees. I had about 25 colonies the past season, and run for both comb and extracted honey. I have a home trade for all of it—comb at 15 cents, and extracted, 2 pounds for 25 cents. I put some of it in jelly glasses, and put my label on them, guaranteeing its purity.

The American Bee Journal is a paper that every bee-keeper should take.

LUTHER BRYANT.

Wayne Co., Pa., Oct. 19.

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will sell tickets within distances of 150 miles, Nov. 25 and 26, at rate of a fare and a third for the round-trip, account Thanksgiving Day. Return limit Nov. 30, 1903. Three through trains daily to Ft. Wayne, Cleveland, Erie, Buffalo, New York, Boston and New England points, carrying vestibuled sleeping-cars. No excess fare charged on any train on Nickel Plate Road. Meals served in Nickel Plate dining-cars on American Club Plan, ranging in price from 35c to $1.00; also a la carte. Chicago City Ticket Offices, 111 Adams St., and Auditorium Annex. 'Phone Central 2057. Depot, La Salle St. and Van Buren Sts., on the Elevated Loop.

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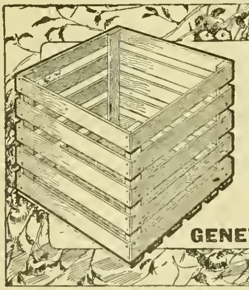

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42A11t R. H. SCHMIDT CO., Sheboygan, Wis.

CONVENTION NOTICES.

Chicago-Northwestern.—The regular annual meeting of the Chicago-Northwestern Bee-Keepers' Association will be held in the Revere House Club-Room, southeast corner of North Clark and Michigan Sts., on Wednesday and Thursday, Dec. 2 and 3, 1903. The Revere House has made a rate of 75 cents per person per night for lodging, when two occupy a room. Meals, 35 cents, or on the American plan at $2 per day. Owing to the Revere House furnishing FREE a place for holding our meeting, we feel that all who can do so should patronize them during the Convention Dr. C. C. Miller, Ernest R. Root, W. Z. Hutchinson, Emerson T. Abbott, N. E. France, Inspector J. Q. Smith. Jas. A. Stone and Huber H. Root have signified their intention to be present. Pin this in your hat. There will be one of the best meetings ever held in Chicago. Everybody come.

HERMAN F. MOORE, Sec.
GEORGE W. YORK, Pres.

P. S.—It has been suggested that bee-keepers bring with them samples of honey, and such little appliances as they have that are considered handy to work with in the apiary.

Missouri.—The Missouri State Bee-Keepers' Association will meet in Mexico, Mo., Dec. 15, 1903. J. W. Rouse will act as host to direct the attendants to the hall, which is free to all who desire to attend. Board may be had at the leading hotels at $1 to $2 a day. Come, everybody who is interested in bees and honey. Let us have a big meeting. We now have 51 paid-up members. Let us make it 100. Procure certificates from your local railroad ticket agents when you purchase your tickets. It may be you can return for ⅓ fare.

W. F. CARY, Sec. J. W. ROUSE, Pres.

Illinois.—The Illinois State Bee-Keepers' Association will meet at the State House, on Tuesday and Wednesday, Nov. 17 and 18, 1903. It has been so arranged that all who become members of the State Association on payment of an annual fee of $1.00 membership, will for the same be made a member of the National Association, and be entitled to all the combined reports of the State and Chicago-Northwestern Associations. Efforts will be made at our coming meeting to give also a membership in the Chicago-Northwestern for the same $1.00 fee, providing it can be so arranged.

Railroad fare has been promised on all the roads in the Central Division of one fare for the round trip, and a fare and a third on the others; but we still hope for one fare on the latter.

JAS. A. STONE, Sec.
Route 4, Springfield, Ill.

WANTED—Extracted Honey.

Mail sample and state lowest price delivered Cincinnati. Will buy FANCY WHITE COMB HONEY, any quantity, but must be put up in no-drip shipping-cases.

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2146-48 Central Ave., CINCINNATI, OHIO.
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For Thanksgiving Day

a rate of one fare and a third for the round trip has been authorized to points within 150 miles on the Nickel Plate Road, good returning to and including Nov. 30, 1903. La Salle Street Passenger Station, Chicago, Cor. Van Buren and La Salle Streets, on the Elevated Loop. City Ticket Offices, 111 Adams Street and Auditorium Annex. 'Phone Central 2057. 27—44A4t

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to meet those who work for us. Cow keepers always have money. We start you in business. You make large profits. Easy work. We furnish capital. Send 10 cents for full line of samples and particulars.
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Forty Years Among the Bees, by Dr. C. C. Miller.—This book contains 328 pages, is bound in handsome cloth, with gold letters and design; it is printed on best book-paper, and illustrated with 112 beautiful original half-tone pictures, taken by Dr. Miller himself. It is unique in this regard. The first few pages are devoted to an interesting biographical sketch of Dr. Miller, telling how he happened to get into bee-keeping. Seventeen years ago he wrote a small book, called "A Year Among the Bees," but that little work has been out of print for a number of years. While some of the matter used in the former book is found in the new one, it all reads like a good new story of successful bee-keeping by one of the masters, and shows in minutest detail just how Dr. Miller does things with bees. Price, $1.00.

Bee-Keeper's Guide, or Manual of the Apiary, by Prof. A. J. Cook, of Pomona College, California. This book is not only instructive and helpful as a guide in bee-keeping, but is interesting and thoroughly practical and scientific. It contains a full delineation of the anatomy and physiology of bees. 544 pages. 295 illustrations. Bound in cloth. 19th thousand. Price, $1.20.

Langstroth on the Honey-Bee, revised by Dadant.—This classic in bee-culture has been entirely re-written, and is fully illustrated. It treats of everything relating to bees and bee-keeping. No apiarian library is complete without this standard work by Rev. L. L. Langstroth—the Father of American Bee-Culture. It has 520 pages, bound in cloth. Price, $1.20.

A B C of Bee-Culture, by A. I. & E. R. Root.—A cyclopedia of over 500 pages, describing everything pertaining to the care of the honey-bees. Contains about 400 engravings. It was written especially for beginners. Bound in cloth. Price, $1.20

Scientific Queen-Rearing, as Practically Applied, by G. M. Doolittle.—A method by which the very best of queen-bees are reared in perfect accord with Nature's way. Bound in cloth and illustrated. Price, $1.00; in leatherette binding, 60 cents.

Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—It is nicely illustrated, contains 160 pages. Price, in cloth, 75 cents; in paper, 50 cents.

Advanced Bee-Culture, Its Methods and Management, by W. Z. Hutchinson.—The author of this work is a practical and entertaining writer. You should read his book; 90 pages; bound in paper, and illustrated. Price, 50 cents.

Bienen-Kultur, by Thomas G. Newman.—This is a German translation of the principal portion of the book called "Bees and Honey." 100-page pamphlet. Price, 25 cents.

Apiary Register, by Thomas G. Newman.—Devotes two pages to a colony. Leather binding. Price, for 50 colonies, $1.00.

Dr. Howard's Book on Foul Brood.—Gives the McEvoy Treatment and reviews the experiments of others. Price, 25 cents.

Winter Problem in Bee-Keeping, by G. R. Pierce.—Result of 25 years' experience. Price, 30 cents.

Foul Brood Treatment, by Prof. F. R. Cheshire.—Its Cause and Prevention. 10 cts.

Foul Brood, by A. R. Kohnke.—Origin, Development and Cure. Price, 10 cents.

HONEY AND BEESWAX

MARKET QUOTATIONS

CHICAGO, Oct. 21. Sales are not frequent, with No. 1 to fancy white comb honey bringing 13@14c per pound. To obtain 13½@14c it has to be perfect and in sections that will not weigh over 14@15 ounces; sections that weigh 16 ounces and over have to be sold at from 1 to 3c less per pound. Extracted, white, sells at 6@7c in barrels; 6½@7½c in cans, according to quality. Beeswax, 28@30c. R. A. BURNETT & CO.

BUFFALO, N. Y., Oct. 11.—The demand for white comb honey is better than it was. The trade is particular and wants only very white, clean stock. If the wax is yellow from travel-stain it does not sell well, and price has to be cut. Fancy white comb, 14@15c; A No. 1, 13½@14c; No. 1, 13@13½c; No. 2, 12@12½c; No. 3, 11@12c; No. 1 dark comb, 11@12c; No. 2, 10@11c. White extracted, 6½@7c; amber, 6@6½c; dark, 5½@6c. Beeswax, 28@30c.

W. C. TOWNSEND.

BOSTON, Oct. 8.—Comb honey continues to be in good demand. Fancy white honey in cartons we quote at 18c; No. 1, at 16c; glass-front cases fancy white, at 16c; No. 2, at 14c. Extracted honey, Florida, 6½@7½c, according to quality.

BLAKE, SCOTT & LEE.

CINCINNATI, Oct. 21—The demand for honey is a little better. The prices rule about the same. Extracted is sold as follows: Amber, in barrels, from 5@5½c; in cans about half cent more; water-white alfalfa, 6@6½ cents; white clover, 6½@7½c. The comb honey market is quite lively, and it sells as follows: Fancy water-white, 14@15c. Beeswax in good demand, at 30c delivered here. C. H. W. WEBER.

ALBANY, N. Y., Oct. 18.—Honey market still firm for honey in comb and receipts not equal to demand; fancy white, 16c; No. 1, 15c; mixed, 14½@15c; buckwheat, 13½@14½c. Extracted, quiet; white, 7@7½c; mixed, 6½@7c; dark, 6@6½c. Beeswax, 29@30c. H. R. WRIGHT.

KANSAS CITY, Oct. 23.—Receipts of comb honey good; demand good; market easier. Receipts of extracted light. We quote: Fancy white comb, 24 sections, per case, $3.00; No. 1, white and amber, $2.75; No. 2, $2.50. Extracted, white, 7c; amber, 5@6c. Beeswax, 25@30c.

C. C. CLEMONS & CO.

CINCINNATI, Oct. 1.—Comb and extracted honey are coming in freely, and the demand is good with steady prices. We are making sales at the following prices: Amber extracted at 5¾@6½c; white clover, 6½@7½c. Fancy comb honey, 15c. Beeswax, 30c.

THE FRED W. MUTH CO.

NEW YORK, Sept. 28.—Comb honey is arriving quite freely now, and is finding ready sale at 15 cents per pound for fancy white, 13@14c for No. 1 white, and 12c for No. 2 white and amber. Very little buckwheat on the market as yet, and prices are hardly established.

Extracted honey is ruling about the same as last with plenty of offerings of all grades.

Beeswax is somewhat declining and selling at present at from 28@29c per pound.

HILDRETH & SEGELKEN.

SAN FRANCISCO, Oct. 21.—White comb, 1-lb. frames, 13@14 cents; amber, 9@11c. Extracted, white, 5¾@6¼c; light amber, 5@5½c; amber, 4½@5c; dark amber, 4@4½c. Beeswax, good to choice, light, 27½@29c; dark, 25@26c.

Market is more quiet than for several weeks preceding, but is fairly steady as to value. Spot stocks and offerings of both comb and extracted are mainly of amber grades, while most urgent inquiry is principally for water-white, the latter being the only kind meeting with much competitive bidding from buyers. Recent arrivals of honey included a lot of 121 cases from the Hawaiian Islands. The bees of the Islands feed mainly on sugar.

WANTED! FANCY COMB HONEY

In no-drip shipping-cases. Also Amber Extracted in barrels or cans. Quote your best price delivered Cincinnati. The Fred W. Muth Co.
32Atf Front and Walnut, CINCINNATI, OHIO.

WANTED—Comb Honey in quantity lots. We are perhaps the only dealers in this article owning as much as 150,000 pounds at one time. Please state quantity, quality and price asked for your offerings. Thos. C. Stanley & Son,
24Atf MANZANOLA, COLO., or FAIRFIELD, ILL.

The Best Bee-Goods in the World....

are no better than those we make, and the chances are that they are not so good. If you buy of us **you will not be disappointed. We are undersold by no one.** Send for new catalog and price-list and free copy of THE AMERICAN BEE-KEEPER; in its thirteenth year; 50 cents a year; especially for beginners.

—THE—

W. T. Falconer Mfg. Co.,
JAMESTOWN, N. Y.

W. M. GERRISH, Epping, N.H., carries a full line of our goods at catalog prices. Order of him and save the freight.

Please mention Bee Journal when writing.

If you want the Bee-Book

That covers the whole Apicultural Field more completely than any other published, send $1.20 to

Prof. A. J. Cook, Claremont, Cal.,

—FOR HIS—

"Bee-Keeper's Guide."

Liberal Discounts to the Trade.

Hives, Sections, Foundation, etc. We can save you money. Send list of goods wanted and let us quote you prices. ROOT'S GOODS ONLY. Send for Catalog.

M. H. HUNT & SON, Bell Branch, Mich.

Please mention Bee Journal when writing.

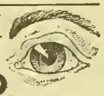
$300,000,000.00 A YEAR and you may have part of it if you work for us. Uncle Sam's poultry product pays that sum. Send 10c for samples and particulars. We furnish capital to start you in business. **Draper Publishing Co., Chicago, Ill.**

HONEY-JARS.

I can sell you a White Glass Honey-Jar, holding 15 ounces of honey, at $4 00 per gross. Also the standard square one-pound Jar at $4.50 per gross. Sample of either Jar by mail on receipt of 10 cents for postage.

J. H. M. COOK, Bee-Keepers' Supplies
62 Cortlandt St, NEW YORK CITY.

41Atf Please mention the Bee Journal.



WEAK EYES CURED AT HOME.

The enormous charges specialists extort for treating the eyes can be saved by a simple but certain home cure which has not only saved dollars for thousands, but saved eye sight of inestimable value. The

Chilian Eye Treatment

removes cataracts without the knife, at home, cures granulated lids, floating specks, scums, growths, sore and inflamed eyes, failing sight, or we refund your money. Send full description of your case and ask for our free booklet and advice.

Chilian Remedy Co., 67 G St, Bushnell, Illinois

Please mention Bee Journal when writing.

☞ Sensible people like natural talk. In preparing your advertisements remember that you are talking to many people who know you and expect you to talk as naturally and as sensibly in your announcements as you do over your counter. Say things that you won't be ashamed to have read in your presence by your most exacting neighbor.—Jed Scarboro, in Printers' Ink.

Please mention Bee Journal when writing Advertisers.

26th Year **Dadant's Foundation** 26th Year

We guarantee Satisfaction. What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS. PATENT WEED-PROCESS SHEETING.

Why does it sell so well? Because it has always given better satisfaction than any other. Because in 25 years there have not been any complaints, but thousands of compliments.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

Bee-Keepers' Supplies OF ALL KINDS *****

Very fine pure-bred BARRED PLYMOUTH ROCK Chickens and Eggs for sale at very low prices.

Langstroth on the Honey-Bee—Revised,
The classic in Bee-Culture—Price, $1.20, by mail.

BEESWAX WANTED at all times.

DADANT & SON,
Hamilton, Hancock Co., Ill

Please mention Bee Journal when writing.

5 Percent Discount

DURING THE MONTH OF NOVEMBER.

There is every evidence that there will be a heavy demand for goods the coming season; and if you defer placing your order until next February or March, you will not only lose your discount, but may have to wait for the filling of your order some weeks. Indeed, you can afford to borrow money, and get your goods now, thus having them all ready for next season's use.

Every Month You Wait, it will Cost You 1 Percent Per Month.

The styles of goods will be about the same for next season, so there is no use waiting for a new Catalog. But remember prices have advanced, owing to the increased price of material; but if you

Take Advantage of Our Early-Order Discount

you will not be paying any more for your goods than last year. A word to the wise is sufficient.

The A. I. Root Co., Medina, Ohio.

BRANCH OFFICES.

CHICAGO, ILL., 144 E. Erie St.
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PHILADELPHIA, PA., 10 Vine St.
WASHINGTON, D. C., 1100 Maryland Ave., S. W.
SAN ANTONIO, TEXAS.
MECHANIC FALLS, MAINE.

Please mention Bee Journal when writing.

The Chicago-Northwestern Convention—Dec. 2 and 3, 1903

AMERICAN BEE JOURNAL

Published Weekly by GEORGE W. YORK & CO., 144 & 146 E. Erie Street.

43d Year. CHICAGO, ILL., NOV. 12, 1903. No. 46.

WEEKLY

OUT-APIARY OF GEO. W. BRODBECK, OF LOS ANGELES CO., CALIF.

THE AMERICAN BEE JOURNAL

PUBLISHED WEEKLY BY
GEORGE W. YORK & COMPANY
144 & 146 E. Erie St., Chicago, Ill.

Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

EDITOR,
GEORGE W. YORK.

DEPT. EDITORS,
DR. C. C. MILLER, E. E. HASTY, EMMA M. WILSON

IMPORTANT NOTICES.

The Subscription Price of this Journal is $1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

The Wrapper-Label Date of this paper indicates the end of the month to which your subscription is paid. For instance, "dec03" on your label shows that it is paid to the end of December, 1903.

Subscription Receipts.—We do not send a receipt for money sent us to pay subscription, but change the date on your wrapper-label, which shows you that the money has been received and credited.

Advertising Rates will be given upon application.

National Bee-Keepers' Association

Objects of the Association:

1st.—To promote the interests of its members.
2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

ANNUAL MEMBERSHIP, $1.00.
Send dues to Treasurer.

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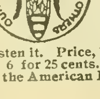
☞ If more convenient, Dues may be sent to the Secretary, at the office of the American Bee Journal.

A Celluloid Queen-Button is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-lapel. It often serves to introduce the subject of honey, and frequently leads to a sale.


OUR TOIL DOTH SWEETEN OTHERS

The picture shown herewith is a reproduction of a motto queen-button that we are furnishing to bee-keepers. It has a pin on the underside to fasten it. Price, by mail, 6 cents; two for 10c; or 6 for 25 cents. Send all orders to the office of the American Bee Journal.

Dr. Miller's New Book

Free as a Premium for Sending Two New Subscribers.

The book contains 328 pages, is bound in handsome cloth, with gold letters and design; it is printed on best book-paper, and illustrated with over 100 beautiful original half-tone pictures, taken by Dr. Miller himself. It is unique in this regard.

The first few pages of the new book are devoted to an interesting biographical sketch of Dr. Miller, telling how he happened to get into bee-keeping. Seventeen years ago he wrote a small book, called "A Year Among the Bees," but that little work has been out of print for a number of years. While some of the matter used in the former book is found in the new one, it all reads like a good new story of successful bee-keeping by one of the masters, and shows in minutest detail just how Dr. Miller does things with bees.

HOW TO GET A COPY OF DR. MILLER'S "FORTY YEARS AMONG THE BEES."

The price of this new book is $1.00, post-paid; or, if taken with the WEEKLY **American Bee Journal** for one year, BOTH will be sent for $1.75.

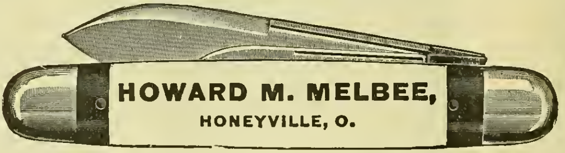
Or, any present regular subscriber to the American Bee Journal whose subscription is paid in advance, can have a copy of Dr. Miller's new book *free as a premium* for sending us **Two New Subscribers** to the Bee Journal for one year with $2.00. This is a magnificent offer, and should be taken advantage of at once. For many of our readers it is not only an easy way to earn a copy of the book, but at the same time they will be helping to extend the subscription list of the old American Bee Journal, and thus aiding also in spreading the best kind of apicultural information among those who would be successful bee-keepers.

Address all orders to
GEORGE W. YORK & CO.,
144 & 146 E. Erie Street, CHICAGO, ILL.

Please Mention the Bee Journal when writing Advertisers *****

The Novelty Pocket-Knife.

Your Name and Address on one side—Three Bees on the other side.



[THIS CUT IS THE FULL SIZE OF THE KNIFE.]

Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the subscriber, and on the other side pictures of a Queen, Drone, and Worker, as shown here.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a last-time, with proper usage.

Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the "Novelty" is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the "Novelties," your POCKET-KNIFE will serve as an identifier; and in case of death, your relatives will at once be notified of the accident.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid for $1.25, or give it as a Premium to the one sending us THREE NEW SUBSCRIBERS to the Bee Journal (with $3.00.) We will club the Novelty Knife and the Bee Journal for one year, both for $1.90.

GEORGE W. YORK & CO. - Chicago, Ill.

☞ Please allow about two weeks for your knife order to be filled.

ESTABLISHT IN 1861
AMERICAN BEE JOURNAL
THE OLDEST BEE-PAPER IN AMERICA

43d YEAR. CHICAGO, ILL., NOV. 12, 1903. No. 46.

Editorial Comments

Let Your Light Shine.

Bee-keepers read the pages of bee-papers to get light from them. Fortunately, bee-keepers as a class are exceedingly unselfish, and when one of them gets new light upon any point he is not only willing, but anxious, that others should have the same light. There are, however, many who seem in some way to have gotten the idea that unless they are very prominent as bee-keepers, or unless they have made some great discovery, their contributions will not be welcomed. Such is very far from the fact. The most obscure bee-keeper in the land may happen upon some improvement that the veterans will be glad to learn. So don't be afraid to add your light, even if you think it be a very little light. The stars don't refuse to shine because they are not as big as the sun. Tell us of your successes, and even of your failures. No matter how trifling it may be, if you have made a gain by any little improvement in management, let us know about it. It's the little things, when all put together, that help to make successful bee-keeping. Remember that "trifles make perfection, but perfection is no trifle."

The Value of Drones.

This is still a matter in which opinions are divided, although the majority probably agree that it is well to suppress their production. There are, however, some who claim that drones are of value aside from the matter of fecundating the queens, it being claimed that they aid in keeping up the heat of the colony. There can be no disputing the fact that drones produce heat, but no one claims that a given weight of drones will produce more heat than the same weight of workers. Yet this seems the sort of reasoning that justifies the presence of drones:

"A pound of drones will produce as much heat as a pound of workers; therefore, a pound of drones to keep up heat in the hive will release a pound of workers to go afield, and the amount of honey stored by this pound of workers will be just so much added to the crop as a gain from the presence of drones."

It seems just a bit strange that men otherwise level-headed should accept such reasoning as conclusive. For a pound of workers in place of the pound of drones would release just as many other workers to go afield, these workers keeping up the heat *while* doing the work in the hive, and in their turn becoming storers, whereas the drones work neither in the hive nor afield.

Honey-Exchange Advertising—Marketing Honey.

On Nov. 3rd we received the following, which will be read with interest:

EDITOR AMERICAN BEE JOURNAL:—Notwithstanding the fact that we are very busy helping producers find a market for their honey, packing our bees away for winter, etc., we must take time to say, Bravo, to your remarks regarding honey exchanges or asssociations, on page 691. We were laboring under the impression that all such were a free lance, and welcome to all the space they could use in our bee-publications. We have often thought that with that advantage, such organizations should be making much more progress than they really are making.

But now, "look a-here," you spoiled it all with that 14½-cent honey article which followed close on the heels of it. The Illinois bee-keeper that got that for his honey had to get it on the market before the trade became posted. Our early sales were at 14 cents, but the large majority of our customers could not get their honey ready for them on account of the factories failing to furnish them shipping-cases in time.

Then we had to drop to 13 cents. At this price we got a considerable sprinkling of our sales filled, some car-lots, etc. But now, where is the market in which any considerable amount can be sold at more than 12 cents spot cash? And that is the only thing that counts now-a-days. We are in close touch with all markets, and ship to them all, and we know of none unless the "case" idea is worked.

Our hobby has been for several years, "Cash at the producer's depot." Counting the vicissitudes attending the shipment, sale, etc., of comb honey, we can not figure out much more than 10 cents for what remains unsold of the crop, unless it is offered in car-lots, which reduces the risk to a minimum, together with the freight and the trouble attending the sale of a car-lot, which is often no more than a 500 or 1000 pound lot.

We believe that the best work we can do is *not* to make honey hard to get, to raise the price, but make it more popular. And we would enjoy being assessed by the National for the purpose of advertising honey. The majority of people must be interested in eating honey before we will see the end of 10-cent honey, no matter how fine.

The honey is excellent this season, and will be a great help in advertising the sale of it for another season.

THOS. C. STANLEY & SON.

We are more than ever of the opinion that the National Bee-Keepers' Association should in some way create a fund for the purpose of advertising honey. Such expenditure would aid every producer of honey in the country. Thos. C. Stanley & Son are dealers in honey, and of course they are willing to contribute to such a fund. We believe not only dealers in honey, but bee-keepers as well, would be glad to help swell the fund for such a purpose. All could well afford to do so, we think, for it would likely cause such a popular demand for honey as would increase the price not a little.

We have noticed a glucose concern lately advertising extensively an article of which they say, "Better than honey for less money." Not satisfied with filching the good name of honey, they even go so far as to use a picture of a straw hive with bees flying around it. What a pity that the National is not in position to follow that up with the advertising of the real honey! Were we still in the honey-business, we certainly would try to do something to counteract such evil effect upon the sale of genuine honey. Of course, we would not be financially able to do very much, but we certainly would make the attempt, and do all we could afford to do in that line.

We hope that either the National will take hold of this matter, or that the various honey-producers' associations or exchanges will get together and begin an advertising campaign that will result in such a big demand for genuine bees' honey that the bee-keepers will simply be unable to supply it even at a greatly advanced price. There is no time like the present for such action. We believe it would have a tremendous effect on the call for honey, not only for this year's crop, but for the future crops of honey.

Room Required for Cellaring Bees.

This is a matter likely to be inquired about at this time of year by those who, for the first time, desire to cellar so many colonies that there may be fears as to sufficient room. Ten cubic feet for each colony has been given as the proper amount of room, and is probably not far out of the way. In the Bee-Keepers' Review, R. L. Taylor says it would be well to allow two square feet of floor surface for each colony it is to accommodate at any one time, thus allowing a cellar 20x20 feet to accommodate 200 colonies. In this Mr. Taylor omits an important factor, the height of the cellar. A cellar 20x20 would need to be only 5 feet high to allow 10 cubic feet for each colony. That would be a very low cellar, although 6 feet is not an uncommon height. An additional foot or two in height would, of course, add much to the capacity of the cellar. Mr. Taylor very properly adds:

> But it must not be overlooked that colonies are variable quantities. Two hundred colonies at the end of a favorable season might easily equal, in heat-evolving capacity, 400 colonies at the end of a very unfavorable season. The 200 colonies, in such a case, would be likely to overheat a cellar of the size suggested in the absence of extra care.

Still further it should be added that the low temperature of the cellar, and the consequent necessity for keeping it tightly closed, has a bearing on the number of colonies that may be accommodated in a given space. If conditions are such that for days at a time the cellar must be kept tightly closed for fear of its being too cold, then it may be that a larger allowance than 10 cubic feet for each colony would be advisable. On the contrary, toward the southern edge of the region for advisable wintering, or in severer climates, where the cellar is unusually warm by means of a furnace or for other reason, so that a door or window may be kept open generally, there might be no suffering with colonies packed so closely that each one would have considerably less than 10 cubic feet.

"The Dairy Show."

In London, England, this is the annual occasion of the meeting of bee-men in October, for the purpose of witnessing or participating in the competition for prizes offered on honey and beeswax. Just why honey should appear at a dairy show may not appear on the surface, although butter and honey combine in a very friendly manner on bread, and "milk and honey" is a phrase frequently found in use, dating back to the time when the Israelites were in bondage in Egypt. Later on, the combination of "butter and honey" may be found in the Bible, where it is said, "Butter and honey shall be eat, when he knoweth to refuse the evil, and choose the good." Isaiah 7:15.

An Argument for Bulk Honey.

This is given by W. W. McNeal, in the American Bee-Keeper, based on the fact, or supposed fact, that section honey is so nice that the public doubts its genuineness. He says:

> Chunk honey appeals to the people in general, because it is on a par with their education in things agricultural. It excites both the admiration and the appetite of the lover of honey, and when he has sampled it he is willing to concede the fact that it is "real bees'" honey. If wrapped in a good quality of butter paper the honey is very presentable indeed, and will readily sell in any market.

Migratory Bee-Keeping.

M. F. Reeve says, in the American Bee-Keeper, that this is practiced by bee-keepers of Philadelphia, Pa. In the fall they move their bees to the open country along the Delaware and Schuylkill rivers, and some seasons reap quite a harvest from the acres of goldenrod, asters, heartsease, and smartweed.

Big Combs.

H. C. Sears, according to his report in Gleanings in Bee-Culture, accompanied by a half-tone illustration, seems to have bees that compete very successfully with Apis dorsata in the matter of building large combs. Two of the combs shown are 22 inches wide and 60 inches long! They were in the siding of a building.

Wax-Moths.

Beginners should be reminded that wax-moths can do no injury in severe cold, and if unused combs are left out where they will freeze during the winter, both larvæ and eggs will be destroyed.

But look out for the depredations of mice.

Why Not Help a Little—both your neighbor bee-keepers and the old American Bee Journal—by sending to us the names and addresses of such as you may know do not now get this journal? We will be glad to send them sample copies, so that they may become acquainted with the paper, and subscribe for it, thus putting themselves in the line of success with bees. Perhaps you can get them to subscribe, send in their dollars, and secure for your trouble some of the premiums we are constantly offering as rewards for such effort.

Miscellaneous Items

The Chicago-Northwestern Convention on Dec. 2 and 3. Don't forget that. Try to be here. It will be held in the club-room of the Revere House, southeast corner of North Clark and Michigan Streets, Chicago. Rates for room and meals reasonable.

Remember the time—Wednesday and Thursday, Dec. 2 and 3.

* * *

Mr. J. L. Strong, of Page Co., Iowa, one of our advertisers during the queen-rearing season, recently sent several queens on an order from New Zealand, received on account of his advertising in the American Bee Journal. The local paper gave quite a write-up of the event, and also Mr. Strong's growing prominence as a queen-breeder.

* * *

Dr. J. P. H. Brown, of Richmond Co., Ga., wrote us as follows Nov. 2:

> "I am still holding the fort. Enjoy good health. Sleep soundly at night. Relish my plain (nearly vegetarian) 'grub.' Mrs. B. is the only complainer—she frequently has attacks of rheumatism.
>
> "Bees have done moderately well this season. The woodman's ax and the farmer's plowshare are gradually curtailing the area of bee-forage. Bees, in our section, are dependent upon the natural flow, and this is being destroyed."

* * *

Mr. Bingham, the Bee-Smoker Man, recently sent us one of his latest smokers. It is the "Conqueror" size, but it is more than a conqueror. We used it when preparing our bees for winter, and such a deluge of smoke! Why, we were almost ashamed to turn such a tremendous volume of smoke on the bees. The movable nozzle fits into a sort of cup at the end of the fire-barrel instead of slipping over it, as is the usual form. This new smoker is exceedingly light in weight, and has a wonderfully strong blast. We should call it "Bingham's Best." It beats anything we have tried in bee-smokers.

* * *

Mr. Geo. W. Brodbeck, of Los Angeles Co., Calif., writing us Oct. 27, said:

> "One of my out-apiaries at Santa Monica had a narrow escape from fire several days ago, but the precaution I had taken in having the brush removed from the near surroundings saved the apiary. As it was, it burned all around it, destroying 200 tons of hay just adjoining. Several reports have come in recently of loss of apiaries by these mountain fires, which often prevail during the dry season."

Mr. Brodbeck was very fortunate in his escape. A mountain fire, in such a dry time as they have out there, would be a pretty wild and direful affair.

* * *

General Manager France is a busy man now. He is getting out an elaborate report relative to the work of the Association during the past year. The large increase of membership (500) since he took hold of it is substantial encouragement and a splendid indorsement. Mr. France has several cases of adulteration on hand, and it certainly will not be his fault if he does not strike consternation in some quarters. The Association is doing splendidly, but it can do a great deal better if it has the moral support and dollars of more men who are interested in its welfare. Bee-suits of various kinds are becoming more frequent again; and if those of you who read this are not members *before* an action is begun against you, you can expect no aid by joining the Association after you get into trouble. The Association is a sort of life insurance, and the small fee or premium of $1.00 entitles you to protection for a whole year, to say nothing of the other benefits you will get.—Gleanings in Bee-Culture.

* * *

Once Late in 20 Years.—A Stray Straw in Gleanings in Bee-Culture for Nov. 1, reads thus:

> "The American Bee Journal for Oct. 15 was mailed two days behind time, the first time that paper was late for 20 years! A printers' strike made the delay. The 'Old Reliable' has been so regular that you could tell the day of the week by its arrival. George W. doesn't intend to have it late for another 20 years."

Editor Root then added this comment:

> "The record up to the time of the strike was remarkable. Mr. York and his predecessor during the time are to be congratulated. May the 'Old Reliable' continue to break the record for another 20 years."

Our thanks are due, and hereby tendered, for the kind words and wishes expressed in the foregoing. We hope it will indeed be 20 years before the old American Bee Journal need be late again.

Convention Proceedings

THE LOS ANGELES CONVENTION.

Report of the Proceedings of the 34th Annual Meeting of the National Bee-Keepers' Association, Held at Los Angeles, Calif., Aug. 18, 19 and 20, 1903.

(Continued from page 711.)

REMINISCENCES OF BEE-KEEPING AND BEE-KEEPERS IN THE EARLY DAYS.

J. G. Corey—After listening to the remarks of Mr. Harbison and Mr. Root, I do not know that I will be able to say anything that will interest you, but inasmuch as I am called on, I will give you the benefit of some of my early experiences in bee-keeping.

To begin at the beginning, where a man first becomes interested in the pursuit, would be to go back to the year 1836. We moved up from the center of the State of Illinois, near the line of the present Illinois Central Railroad. We did not make as good time as they make now, and we were two or three months going up that 200 miles. We landed on the east side of the river, a few miles below Rock Island, and they met us with the ferry boat and ferried us across Rock River. The boat was built by hewing down trees and hewing out the timber.

We continued our journey, my father not being satisfied with that country, and we located in Stephenson county, 14 miles north of Freeport, near the northern line of the State of Illinois. We arrived there, I think, about the middle of May, and after building a little cabin, the man that drove our team commenced cutting down the trees in the grove, and splitting up rails to fence our farm. In doing so, he very often came across bee-trees and marked them, and the mark was respected; and in the fall, when our pork-barrel was empty, we filled it up on chunk honey. We then had enough bee-trees for filling our pork-barrel of some 300 or 400 pounds. We cut them down below the entrance and above, and set them down on the south side of the fence. We fenced our dooryard in, and I was installed as bee-keeper, to watch those bees when they swarmed, and assist about hiving them. We made our hives out of sections of the basswood or linden tree, and called them "gums." We bored holes in them, and put cross-sticks in them, and split out lumber to make the tops, and sawed little notches for the bees to fly out. That was the primitive apiary in Stephenson county. I became interested in bees by watching these bees. Then, afterwards, I assisted a man by the name of Rowe, about 5 or 6 miles from us. He was a Pennsylvania German, who had been a bee-keeper in that primitive style. He maintained that no man could keep 100 colonies of bees. He said he had 99 once, but when he counted them over, some of them had decamped, and he had but 99 still, and he did not believe a man could keep 100 colonies.

Soon after that a pamphlet fell into my hands, which seemed to have been written by a man who was a little bit "light in the upper story." He claimed to have invented a bee-bellows which would keep the bees in; the bees would fly out, and all you had to do was to go in there and get out wagon-loads of honey. Not knowing, of course, whether that was so or not, it served to increase my interest in bee-keeping.

I had no opportunity to gratify my desires in that direction until 1859. I was then high up in Plumas county; the altitude is something a little less than 4000 feet above the sea-level. I picked up a paper and read an account of the invention of a movable-frame hive by Mr. Langstroth, and a review of his book. I soon obtained a copy of his book, and it cost me $4.00 or $5.00. I think it cost me $1.00 express from San Francisco up. I read that book with a great deal of attention and care.

In December (I was then acting as County Treasurer of Plumas county), I went to Sacramento to settle with the State Treasurer. Of course, as I had become interested in bees, I was told of Mr. Harbison. I went out to his place, but did not find him at home. I was told that a colony of bees would cost me something like $200 to $250. But that didn't make an difference.

After that I went down to San Francisco to have some books made for the county. As the facilities for book-binding were not very perfect, it took two or three weeks to get the books made up. Meantime I was looking around for bees. I picked up a paper and found an auction notice of some bees that had come across the Isthmus of Panama, and the owner had left them in the hands of the Wells-Fargo Express Company, and they were to be sold for the charges. I looked them over, and when they were put up for sale I bid in two colonies at $35 apiece. When the auction was over a man came to me and told me he lived in Oakland, and that he had been buying some bees that had come across the Isthums of Panama; that he had transferred them and built them up, and they were in good shape. He asked me what I proposed to do with them. He said, "You ship them over to Oakland, and we will see what there is to them." Well, I did so, and we found they were very weak, but both had queens.

He made a proposition to sell me a box about 12 inches square, with the combs fastened in so they would not move. The box was made of cracker-box lumber about ⅜ of an inch thick. It suited my notion on account of high altitude and heavy transportation. So I made a bargain with him, and paid him "boot money," and let him have mine at $35 and took his colony at $100.

I took that colony up on the steamer, and when we got to Marysville, a man told me the country was getting full of bees, and he didn't see why I wanted to pay such a price. He said there was a man named Kennedy out there who had, I think, 65 colonies. Perhaps he had divided or subdivided them until they did not seem very strong. But they were working very nicely. However, I took my colony on the stage, and went up to Bidwell's Bar. I owned an interest in a saddle-train connected with the Feather River Express. Our facilities for transportation were rather imperfect, and we went up to the nearest place called Buck Eye Ranch, and from there over, and the mountain was covered with a great deal of snow, in some places 25 to 30 feet deep. My partner was there with me, and we got ourselves across the mountains. I had my colony of bees, and he had some express matters.

I took along some honey, and mixed that up and dashed in a little honey once in awhile, and let the colony rest on a window-sill where the bees could fly out into the yard. The choke-cherries soon blossomed there, I think about the latter part of February or the first of March. My bees built up very rapidly, and on June 6, 1860, my first swarm came out. Court was then in session. They flew out and up on a pine tree, and the man who went after them said the tree was 95 feet high, and he charged me $5.00! He tied a cord around his waist, as he would lower a body on a rope. He would cut the limbs away below and let himself down. When court adjourned, we came out and saw this colony of bees hived. Then, having read Langstroth a little, I made a sub-division of this colony, and at the end of the season I had six colonies of bees in good shape. I was offered $1.00 a pound for honey very often, but I wanted to build up the bees.

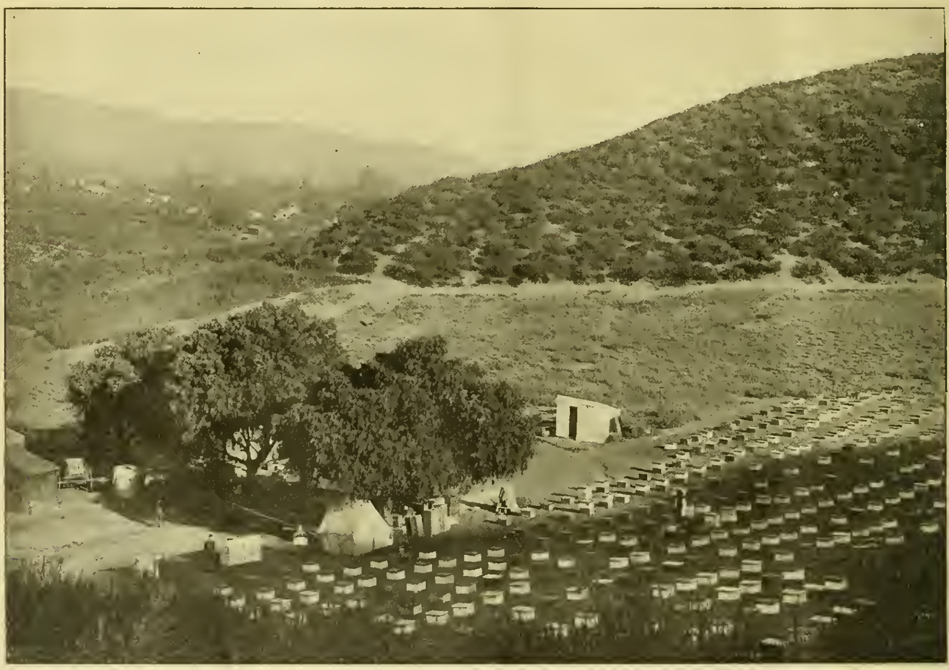
Soon after that I received notice of my father's death. I sold my six colonies of bees for $600. The man is living there in that country now. It is said that bee-keepers are quite long-lived, but many of us are getting so old that we are not able to do very much in the business.

I located in Ventura county in 1874, and bought a half interest in about 100 colonies of bees, hived in Langstroth hives. We did not have any foundation then. He did not know what he could do, though. I bought a half interest in them, and paid him at the rate of $8.00 a colony for them. I transferred them in the spring of 1875. I gathered up bees around there. Then I went to San Francisco on business and tried to get some of the Harbison section-boxes. They told me Mr. Harbison had moved to San Diego, and all he had were down there. But I found a man named Weatherby who made me some section-boxes, which he called the "Weatherby Modification," but they were virtually the Harbison section-boxes. I bought of him section-boxes and packing-cases, and produced 12 tons of honey in the Harbison boxes, and 8 tons of extracted honey. My extracted honey sold for 10 cents, and comb honey at 18 cents. I still own some bees there.

My success has been variable, sometimes very good, and at other times not so good. We have had a series of poor years, but still we stick to it, and the old bee-keepers, somehow or another, can not entirely shake it off so as to get rid of the bees. The bees seem to stick by them. Perhaps if we did get out of it entirely a colony would come along and alight on our trees, and we would have to have them anyway. My neighbors come in to buy of me every few days during the season. They come down and are willing to give me a half dollar, or a dollar, for an old rejected hive, and so I sell them. I do not know that it would be possible or desirable to do so, to get rid of the bees.

My acquaintance with bee-keepers has been mostly through the bee-papers. I have been a very close reader of them all these years. I have the first copy of Gleanings ever issued, and the first copy of the Bee Journal that Mr. Wagner published. I have barrels and barrels of them, and my successors may some time read them. I have kept them very carefully.

I have attended a good many bee-keepers' meetings, and I believe I have joined about all of them. I have found it of benefit socially, and in getting items of people engaged in the pursuit. I never expected to be permitted to meet the men I have met here, whom I have been reading after so carefully for so many years, but I have finally met them. Perhaps the next time the National meets here at Los Angeles you may not see me here; but at the same time there will be some one, perhaps, to take my place.



APIARY OF W. J. MCCARROLL, OF LOS ANGELES CO., CALIF.

(Note the Extracting Tent, "Pipe Line," and Storage-Tank in the shade of the pepper-trees. The growth on the opposite hill is mostly black sage.)

I thank you very kindly.

Mr. Hyde spoke briefly, giving some reasons why, in his opinion, the meeting should be held in San Antonio next year.

Dr. Miller moved an adjournment, but the chairman called for the report of the committee on Honey-Producers' Association, and the motion was withdrawn. Thereupon Mr. F. E. Brown reported as follows:

REPORT OF COMMITTEE ON NATIONAL HONEY-PRODUCERS' ASSOCIATION.

We, the committee, appointed by the National Bee-Keepers' Association at the Denver convention, for the purpose of drafting plans for the commercial part of the National Bee-Keepers' Association, beg to submit to this assembly the following:

Believing that it is the sense of all large producers of honey and local associations now organized in the West, as well as many smaller holders, that we, as members of the National Bee-Keepers' Association, use every available means afforded us to create a National Honey-Producers' Association upon a strictly commercial basis, for the handling of our product, that we may realize to ourselves, as producers, the full value of said product; and

WHEREAS, The Colorado Honey-Producers' Association and the California National Honey-Producers' Association, as well as many other smaller associations, are well on the road to success, that we encourage them in their good work. And that we recognize in the name and the formation of the California National Honey-Producers' Association the existence of the National Honey-Producers' Association, upon the conditions that their by-laws be amended to cover the necessary requirements for the broadening out and the uniting of other associations.

And we further recommend that the chairman appoint a committee of seven to draft plans by which this might be done; and when their report is submitted and accepted by this Association, as well as the California National Producers' Association, then it will become fully recognized as the commercial part of this Association, or the National Honey-Producers' Association.

W. Z. HUTCHINSON, }
O. L. HERSHISER, } *Com.*
F. E. BROWN, }

The chairman appointed the committee as follows: F. E. Brown, chairman; E. S. Lovesy, Herman Rauchfuss, H. H. Hyde, J. P. Ivy, C. P. Dadant, O. L. Hershiser.

A motion was carried that the report be approved.

Dr. Miller asked that five minutes be given to the Texas matter.

Judge Pascal, of San Antonio, was then introduced to the convention, and in a somewhat lengthy speech invited the convention to that place next year.

The meeting then adjourned until Thursday morning.

(Continued next week.)

Contributed Articles

Prevention of Increase—Criticisms Explained.

BY ADRIAN GETAZ.

I DON'T think any of my past contributions have received as many comments as the one on page 407.

NORTH VERSUS SOUTH.

One first cause of misunderstanding is often the difference of "locality." In the Northern States, generally, the honey-flow (when there is any) opens suddenly, is very heavy, comparatively, and lasts, without interruption, perhaps about six weeks, as a general rule.

In the South, the conditions are altogether different. There is no continuous honey-flow as in the North.

There is a long-drawn honey season, during which the flow comes very irregularly—"by jerks," to use one of Rambler's expressions. That is, a few days of tolerably good flow, then a slack, then a week or two of flow, then, perhaps, a total interruption, and so on throughout the whole "honey season."

It is easy to understand that the methods of management must necessarily be different in two sections of the country. In the North it will do to build up the colonies as rapidly as possible early in the spring, and then let the brood-rearing diminish in order to increase the surplus. But in the South we must not only build up early, but maintain the full strength of the colonies during several months. This requires two conditions:

1. A large brood-nest, so the queen should be able to lay at her full capacity. As to what constitutes a large brood-nest, I found the size advised by the Dadants the best—10 Quinby frames.

2. No swarming, neither natural nor otherwise. The honey-flow, or rather the "jerks" that constitutes our honey season, are (except now and then) not strong enough to furnish anything like a surplus and rebuild a brood-nest. It is one or the other. Please bear in mind, that no swarming thus understood, means no increase, that it means keeping the bees, brood and combs together throughout the whole season. The mere issuing of the swarm is only a detail, as the swarm can be returned.

REMOVING THE BROOD.

The prevention of swarming thus understood, is what gave me the most trouble. I spent some five or six years in experiments. One of those were mentioned in my contribution of June 25, and consisted in taking out all the brood, putting it in another hive, and returning it after five or six days (cutting out the queen-cells, of course.) I also stated that the process was a success as far as swarming was concerned, but was objectionable, chiefly, by requiring an extra set of hives to hold the brood, and from the fact that the bees, during these few days, worked too much in the brood-nest and too little in the sections. One of my critics misunderstood me completely. He thought that by preventing I meant simply preventing the issuing of the swarm, and innocently remarked that the extra hives would be needed for natural swarms anyway. But that is not what I was after. What I wanted was, as stated in the beginning of this article, prevention of increase; keeping bees and brood together.

As to the building of too much comb in the brood-nest while the brood was out, another critic said I ought to have put on a super from another hive where bees were already at work. That's all right as far as it goes. But as a matter of fact, all the colonies thus treated were already well at work in the sections.

MODERATE INCREASE.

Another plan is to take out a comb every week or so and replace it with a comb of foundation. The combs taken out can be used to form new colonies, or reinforce whatever weak ones may be in the apiary. The object is to provide room for the queen to lay. As long as there is plenty of young brood to feed, the nurse-bees will not undertake to rear queens.

The advisability of putting in a comb of foundation rather than an all-ready-built comb has been questioned. Let me say here, that I am writing exclusively from the comb-honey producer's standpoint. For an extracted-honey producer the problem is an easy one. All he has to do is to give enough empty combs to accommodate the brood and all honey brought in. If he gets in a pinch, he can extract some of the combs already full.

But the comb-honey producer is confronted by entirely different conditions. The empty combs are, by no means, plentiful. I have but six now, and would not have a single one if one of my colonies had not died last winter.

But a built comb will not do, anyway. Let us study the "conditions." When the flow comes the brood-nest is already full, or will be in a very few days. The secretion of wax and the building of comb in the sections are not started yet, so there is no room, or but very little, in the sections to put the honey in. Yet it is coming all the day. Having no other place the bees put it in the brood-nest as fast as the matured brood emerges. and crowd the queen out. Eventually, swarming follows if the apiarist does not remedy that state of affairs.

Now, suppose we give an empty comb. There is only one queen to lay eggs. There are thousands of bees ready to fill that comb with honey. and they will do it.

But give a frame of foundation and the "conditions" will be different. In the first place, it will take the bees some time to draw the foundation. Then, as soon as the cells are drawn, the queen can lay in them, while they can not hold honey until they are about an eighth of an inch longer. These two conditions enable the queen to follow the workers and lay as fast as the cells are ready. Result: a solid comb of brood.

Somebody said that a frame of foundation, or a fresh comb, prevents the queen from laying further, acting as a division-board. There is nothing in it. Queens are constantly passing from one comb to another, and when they do stop at a fresh comb it is because they have all the room they need on the side where they are.

One of the critics says that that plan involves too much work, and he prefers "shaking" Perhaps it does; I don't know. But, by the above plan, 2 or 3 combs are usually all that it would be necessary to take out. That is less work than shaking 8 or 10. It may be objected to, that these 2 or 3 combs are to be taken out at different times, and would necessitate opening the hives 2 or 3 times instead of once. That is true, but it is to be done at a time of the year when the hives have to be opened to see if the bees are ready for the supers; put on the first super, and later on the second. So, after all, the plan can be carried out with but little extra work.

"SHOOK" SWARMS.

Shall we "shook" or not? No, in my opinion, not in the South, and I believe not in the North, either. But don't misunderstand me again, and think I am advising natural swarming. I want to keep the bees, brood, *and combs* together. It has been said repeatedly, that by placing the old hive near, or above the swarm, or by shaking a second time, nearly all the bees can be secured in the swarm. But that's not all. The brood-nest has to be rebuilt. Did those who argue in favor of shaking, ever stop to think that a brood-nest of only 8 Langstroth frames contains enough wax to fill 64 sections? Would not 64 full sections be preferable to a new brood-nest, when the old one will do just as well?

CAGING QUEENS.

After trying everything in sight, and almost everything out of sight, so to speak, I came to the conclusion that caging the queens for 8 days, or requeening, are the only ways really practical. Both methods have their advantages and disadvantages. Requeening requires more work and more attention. Besides, some queens fail to mate, or are lost some way or other. On the other hand, a young queen will, in some way that I can not understand, induce the bees to carry the honey out of the brood-nest into the sections far better than an old one.

In my locality there is (with proper management) but little swarming, owing to cold spells of weather that come now and then, even until the middle of May or later. Only about 10 swarms out of every hundred colonies is the average percentage.

To manipulate 100 colonies in order to prevent 10 swarms would be too much work. Furthermore, the 90 colonies, which would not have swarmed, will do better if left undisturbed.

So I let them swarm, if they want to, and treat only those that do swarm. Using queen-traps, I have no chasing of swarms to do (except in some occasional cases), and no queens to hunt, since I get them in traps. But if I had a large number of swarms to attend to, I would prefer caging, by a long way, and do whatever requeening I might need after the honey season. And if anything like a large portion of my colonies were to swarm, I would certainly forestall them, and cage throughout the whole apiary at the proper time to be effective.

There is a misprint in my contribution on page 407. The last part of the second paragraph in the second column should read: There must be a forced interruption of some sort or other to destroy the swarming fever, or, rather, queen-cell-building fever. Knox Co., Tenn.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Tomatoes and Honey—Origin of Propolis.

I have recently discovered a new use for honey, and hasten to place the recipe before the bee-keeping sisters:

Slice tomatoes, add a little honey to each slice. Try it and report.

We are amateurs as yet in beedom, but have already established some rules. One is, to be sure we have a plentiful supply of honey for our own use before selling any. Another is, that whoever gets a sting is entitled to an extra pound of honey to eat. One member of the family fears the bees, so does not go near them, and, consequently, does not get stung; but being a kind, sympathetic chap, offers to share the sting by eating half the honey.

Query: Can you explain how the bees make propolis? and what from? Alice M. House.

Oneida Co., N. Y.

They gather propolis from the gums to be found on the buds and branches of many trees. They may also often be seen collecting and packing upon their legs propolis that they find about the apiary on old frames, etc.

Best Size of Hive for Women.

What size of hive is best for women, the 8 frame or the 10 frame?

There are some advantages in having a large hive. There is always abundance of room for stores, and you need not worry about the bees starving in winter. That scores one for the 10-frame, and one against the 8-frame hive, for there is always a little danger if you have only 8 frames, and a very prolific queen, that she may keep the frames so filled with brood late in the season that the honey will be mostly put into the sections, and when those are taken off in the fall it may leave the colony short of stores; so we will have to admit that the 8-frame hive will need careful watching on this point.

Then in reference to swarming: There will certainly be less tendency towards swarming with the 10-frame than with the 8-frame. That is the second item in favor of the 10-frame hive, and really those are the only two items that I can think of in its favor and against the smaller hive.

But with proper management we can use 8-frame hives without much trouble from starving or swarming, and they are oh! so much lighter and more pleasant to handle than the heavier hives. Just in the matter of supers alone it makes so much difference. Take, for instance, a super that fits an 8-frame hive holding 24 sections. When these sections are filled with honey, and the super also filled with bees, it is about all the average woman cares to lift, especially if she has to lift them nearly, if not quite, all day long. We will say that each colony will average 3 supers apiece during the honey harvest. Every time you open a colony those supers have to be lifted off and then on again, unless some of them are ready to come off for good—quite a bit of lifting to do if you go through 50 or more colonies in a day.

Now, suppose we have to lift supers that fit a 10-frame hive; won't it be more than the average woman can do? It seems to me that this one item will bar out the 10-frame hive as far as women are concerned.

There are other things to be considered, such as hauling bees to out-apiaries, carrying them into the cellar, etc. Of course, it is possible to hire these things done, so I don't think they count so much as the things that have to be done every day.

Some one will say, "But you can have larger colonies with 10-frames than with 8, and it is the large colonies that give us the honey." It is true that the strong colonies give us the honey, but can we not have just as strong colonies with the smaller hives? "No," you say, "a good queen will fill more than an 8-frame hive." Of course she will, and for that matter more than a 10-frame hive, and if we are to be limited to a single story the 10-frame hive will, in many cases, be too small. But there is no law against using two stories, and I have known an extra queen to fill fairly well two stories of 8 frames each. That's for the early part of the season, before the harvest, and for that time 16 frames will, in many cases, be better than 10 frames, or than 20 frames.

When the time of harvest comes, the queen will need less room, and will get along very well with 8 frames. If we are working for comb honey we want the honey to go into the sections. We don't want the bees to have much room to store in the brood-frames, and even if there were no advantage in the lighter handling, it is likely we can get more section honey by having only 8 frames during the harvest.

For extracted honey the room needed can be gauged by the number of stories given.

But it should be said that any one who is not willing to give the proper attention, so that there shall be no danger from starving, will do well to use the larger hive.

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

UNPROFITABLE COLONIES—BEE-HIVE EXPERIENCE.

Sister Morgan found a colony that has its duplicates in many places—no good to anybody, but getting along themselves nicely left entirely alone. Temptation to call them a worthless strain of bees; but in most of these cases we may presume the bees, queen included, just as good as the average. Often they lack any *really* convenient place to build, and that prevents any surplus. I remember how I used to keep bees when I was in box-hive heathenism, and I can almost wonder that they *ever* mounted to the tops of my great empty boxes and commenced building there. Then there's the too-big hive—full of comb, and with lots of surplus honey in the comb nearly every fall; but no one has the enterprise to break in and get it. Page 617.

A BLIND BEE-SISTER'S CHEERFUL LETTER.

The letter of the blind bee-sister sounds in its very cheerfulness and matter-of factness pathetic. Sitting there under the trees and putting frame by frame and hive by hive in order. Curious that the last two hives of a great lot, supposedly all dead, proved to have bees enough in to be salvable—and to make them into eight good colonies in one season was famous work. Page 617.

CARNIOLANS AND ADELS.

Isn't it Carniolans instead of Italians that the Adels were to start with, Dr. Miller? Unselected bees brought from Carniola are of two different types, if I have the right of it, although the two types are pretty thoroughly mixed. There is the steel-gray type, and the type which is more or less yellow-banded. Pretty much everybody decided for the steel-grays, and worked to eliminate the stripes. Mr. Alley, on the contrary, built up a real nice strain of striped fellows. 'Spects he does'nt care whether you call 'em Italians or not, so as you buy 'em. Page 619.

NO DANGER YET FROM THAT NEW SWEET.

Saccharine was a reality, but it has not done all that was anticipated for it a few years ago. So about this wonderful South American plant, perchance. It's sweet can hardly be a sugar (providing the tales told of it are anything more than yarns), and a sweet chemical not a sugar at all would rather be a competitor of saccharine. Of course, it *might* prove much cheaper, better flavored, and less open to medical suspicion than saccharine. Hardly affect honey much unless it is very delicious, indeed. Page 627.

MAX JENNEY WAS ALL RIGHT.

A railroad man that is not trying to be a Trappist monk in the matter of spoken words, deserves the celebration you give him. Honors to Max Jenney! Even possible that if the train had come to a sudden and unexpected stop he would have told you why it was, if he could. Page 628.

THE "NATIONAL" IN CALIFORNIA'S ASSOCIATION.

The Californians got out nicely when blamed for the "National" in the title of a local honey organization—invitation to all similar organizations to couple on and made it national. Page 630.

THE REAL FUN IN LIFE.

Big contract Prof. Cook blithely essays when he says, "We have to convert the whole country." He also gets in much of true philosophy, true Christianity, and true how to be happy in this life when he says, "The real fun in life is getting under a big load and raising it—under a great problem and then make it move." Page 630.

MORAL PRINCIPLES THAT ENDURE.

Noble sentence of Mr. Abbott's, anent increased profits, decreased efforts—and renunciation of personal conscience.

"There are high moral principles that lived before these things were, and they will live after these things are gone."

Honey is indeed one of the last things to be forced up artificially—or near enough that, that many sensible bee-folks feel shaky. Still, I think we should preserve the old maxim, Do not evil that good may come. When all things have their sales combinations, and all go up, up, up, responsively and endlessly, some now and some next opportunity, it can only result in a general crash of some sort. Earth, and not moon, is where we belong. The further we get from terra-firma the more we put ourselves in the power of even a gentle financial gale. Make way for the *universal*—power of some sort—that adjusts *relatively* all prices, and says first of every product, What *ought* this to be sold for? Bureau at Washington, I think—with power to enforce. Page 630.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Swarming—Rearing Queens for Italianizing—Smoking Bees.

1. Would it be a good plan to place a colony that had just sent out a prime swarm in the place of one that was about ready to swarm, if I wish to keep down increase?

2. Would trapping off the drones make any considerable difference with the amount of surplus honey?

3. Should I attempt to rear Italian queens to change my stock at home, or buy enough? Can it be done with only one queen as a start?

4. What effect would a great deal of smoke have upon bees that are very cross?

5. Would smoke enough make them docile? NEW YORK.

ANSWERS.—1. No; it will increase the swarming. When you put a colony that has just swarmed in place of another about to swarm, you will have a swarm just as soon as the first virgin is ready for swarming, and the colony that you moved will probably be ready for swarming two or three weeks later.

2. The drones, no doubt, eat a considerable amount, and trapping them would make just so much more surplus. You would still be out as much surplus as the amount of honey necessary to rear the drone-brood; so it would be better to allow little or no drone-comb in the hive, and then you wouldn't need to kill off the drones.

3. Please make up your mind at the start that you can't change to Italians and keep nothing else if other bees are all around you, even if they're two miles away. Yes, with one queen as a start you can manage very well, getting a new queen each year, if necessary.

4. I have seen them driven entirely out of the hive by too much smoke.

5. No, it may make them give up for the time, but their dispositions would remain the same. Some report that with certain kinds of bees heavy smoking only makes them worse.

◆

Producing Section Honey Over Deep Frames.

You say in your book that comb honey can be produced over Langstroth frames as successfully as over shallower frames. I have only Dadant-Blatt brood-frames in my hives, and these frames are still deeper than the Langstroth. I would like to produce over these frames section honey as well. Is that possible? There is room in my hives for 13 brood-frames, but in reality only 9 are used, with 4 dummies (2 on each side). GERMANY.

ANSWER.—I'm not sure. I do not now recall the exact depth of the Dadant-Blatt frame, but I think you could produce section-honey over them with fairly good success. But you can not successfully use a super the full size of your hive unless the hive be filled with frames, for the bees will not do good work in sections at the sides over the dummies. Your supers must be only large enough to cover the 9 frames. If, however, you want to have the super the full size of the hive, you might try having the four dummies between the frames instead of at the sides, putting a dummy between the 2d and 3d frames, another between the 4th and 5th, then between 6th and 7th, and between the 8th and 9th. You will find that a dummy between the frames will make less trouble than you might imagine. It is barely possible that conditions in Germany may make a difference, but I hardly think so.

◆

## Questions on Bee-Management.

I am quite an enthusiast on the subject of bees, and am trying to learn all the different branches by detail. I carefully read all the text-books—some things I don't understand, and if Dr. Miller will get his "One Year Among the Bees" before him while I ask a few questions, he will better comprehend my wants. Now, Doctor, turn to page 75, line 37 (last line)—

1. In working this change do I understand that there is a queen below and a honey-board between, or what keeps the queens apart?

2. Page 76, line 36. Do you mean the parent or the young swarm?

3. Page 77, line 21. What is meant by incipient queen-cells in this case?

4. Page 79, line 1. What is meant by a swarming colony in this instance.

5. Page 79, lines 17-18. Is there anything between the nuclei and colony below to prevent killing each other?

6. Page 81, line 2. Why did you give young brood if the queen was there?

7. Page 81, line 18. Placed frames, bees and all in a hive—what is to prevent killing in this case?

8. Page 81, line 24. What is meant by spreading the brood of these young colonies? What do you mean by saying also, on lines 25 and 26, they can be made to rear brood faster than if *left to themselves?*

9. Give the appearance of brood up to the time it becomes too old for queen-rearing.

10. Page 83, line 12. What paraphernalia for filling combs?

11. Page 86, line 3. When you unite two or more weak colonies in the fall, do they fight and kill each other, and what do you do with the queens?

12. In breaking up nuclei, generally in the fall, what is done with the queens?

13. Is it best to kill the escort bees in introducing queens, or will they interfere with the success in anyway?

14. Don't some colonies leave old queen-cells that have been once used, on their combs, or should all trace of them be removed after using them—by the bees?

15. What is meant by a single bee running around on the entrance-board, shaking itself, and cutting up as if for amusement of other bees?

16. Describe how a Porter bee-escape should be made—dimensions of material, etc., as mine, made the only way I could think of, failed.

17. It is frequently that when a colony swarms it is placed near the parent hive, and in six or eight days the latter is removed to a new stand and the young swarm occupies the old stand. Why not move the old colony away as soon as hived? Why wait six or eight days?

18. I have a colony in good condition every way, with an Italian queen, lately introduced, in which I see the bees are dragging out young brood, mostly drone-brood, I think, but some worker-brood. They have been fed, and have plenty of honey.

19. I am anxious to rear all the queens I can from 5 colonies I have Italianized with queens; these 5 colonies will be 100 yards at right angles from the main apiary, with some large trees and dwelling-house between them, with the natural flight of the apiary drones due east, and the 5 hives of Italian bees facing south. Will these 5 colonies of Italians furnish drones pure to mate with the young queens? and will the young queens be pure-blood if they mate with the drones of these Italian colonies?

20. In having two or more after-swarms in one hive, does either swarm ever come out with its queen and desert the others, or would they all go if any went?

21. I read of bee-men who speak of adding or changing supers on hives with bees and all. What prevents fighting?

Now, Doctor, this may seem quite a long list of questions to be asked, but you invite the subscribers of the American Bee Journal to ask, and I have accepted the invitation. I am just crazy to learn all I can about bees, and am taking up the work one subject at a time, and am now on *queen-rearing and introducing*. MISSISSIPPI.

ANSWERS.—Allow me to premise that the book, "A Year Among the Bees," was written by a man who didn't know all about bees, and I wouldn't approve all the things he recommends. Between you and me, I don't count that an up-to-date book. Another book, "Forty Years Among the Bees," is not quite so bad.

1. In the case you ask about, the author is telling that he keeps the hive containing his breeding queen on top of another hive, or over the super of another colony, moving it occasionally to a new place, thus weakening it by making it lose its flying force at each change. Of course, there must be no connection between the upper and lower hives whatever; the bottom-board of the upper hive stands on the cover of the lower hive. Instead of that plan, I prefer to keep my best queen in a nucleus standing permanently in its own place, drawing from it brood and bees if at any time it gets too strong.

2. A colony has swarmed, and the queen being clipped the swarm has returned. The queen is taken away from this colony, as well as all of its eggs and unsealed brood, so it will start queen-cells from the eggs or brood given.

3. Incipient queen-cells are those that are started but not very far advanced, as when started only a day or two.

4. The bees of a swarming colony are recommended as being good bees from which to start nuclei, because they will stay where they are put. A swarming colony is any colony in the humor of swarming, and in the present instance more particularly one that has swarmed and returned, because of having a clipped queen.

5. Yes, if a nucleus is set on top of another colony, the nucleus has its own bottom-board, so there is no communication with the hive below.

6. It is a common and a good practice to give a frame of young brood to a colony or a nucleus having a virgin queen. This helps to keep up the strength of the nucleus; it is supposed to have a stimulating effect in starting the young queen to laying, and, if one finds no queen-cells started on this young brood on a future visit, one can feel pretty sure the queen is still there.

7. When the frame of brood on which a queen is found is taken with its adhering bees from a nucleus and given to a queenless colony, the chances for friendly reception are better than if the queen were given alone, because the queen is not disturbed as when caught, and consequently does not act in a frightened manner; moreover, she is surrounded by a strong guard of her own bees to protect her.

8. By spreading brood is meant moving two frames of brood apart and putting between them a comb containing no eggs or brood. The queen will lay in this inserted comb very promptly, and thus the colonies will rear brood faster than if left to themselves—that is, faster than they would if the brood had not been spread. This refers to building up nuclei into full colonies in hot weather, when there is no danger of chilling the brood by spreading it.

9. It appears just the same as it does immediately after becoming too old, only it is smaller. You can learn about the size of brood by taking eggs that you know were laid on a certain date, and then watching their size at different stages. A larva is too old for queen-rearing after three days old, and it is probably a good deal better when only a day or two old, for I find that when allowed their choice bees select for queen-rearing larvæ only a day or two old. The safe way is to use the smallest larvæ you can find.

10. The paraphernalia described in spring management at page 22. But it is a mussy job to fill combs with syrup for feeding, and I'd much rather have a Miller feeder.

11. Turn to page 82, and you will see that one of the queens is removed two or three days before uniting. Generally, there is no fighting.

12. Generally part of the nuclei are queenless, so there are no queens to dispose of.

13. I don't know. It is more convenient to leave the escort bees with a queen, but it may be safer to have them out of the way. Then there is the remote chance of introducing foul brood by means of the escort bees.

14. In any hive, where queens have been reared, you are likely to find the remains of queen-cells—called cell-cups—perhaps a quarter of an inch deep.

15. I don't known.

16. I don't think I could give instruction sufficiently clear to enable you to make a Porter escape, and if you had the instruction it would be cheaper for you to buy one. Besides, you might be prosecuted for making and using a patented article.

17. In about 8 days after the first swarm, under ordinary circumstances, a second swarm may issue with a young queen. If the hive is moved a day or two before this, the colony is depleted of its field-bees (which go to the old stand and join the swarm), and is so weakened and discouraged thereby that the superfluous young queens are killed, and further swarming is given up. If the old colony were moved as soon as hived, it would be getting stronger every day, and on the eighth day would be strong enough to swarm.

18. It is a common thing for bees to destroy both the drones and the drone-brood when they no longer feel the need of drones, especially if there is a let-up in the honey-harvest.

19. A single colony will furnish enough drones for a whole apiary, and young queens from pure mothers mating with pure drones will be pure, but no matter how your colonies are placed you can not be sure that your young queens will not mate with drones from colonies a mile or more away.

20. They would not be likely to separate again.

21. Nothing—no need to prevent it. Put a super with its bees on a strange hive during the harvest, and you'll find there is no inclination to fighting.

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FROM MANY FIELDS

From One of Our Old Friends.

I judge there are not many that read the American Bee-Journal now that read it in the days of its infancy, when it was published by Mr. Wagner, in Washington, D. C., in the days "Novice" used to give his experiences in it, and the first thing I looked for was what "Novice" had to say, for I was in the same boat, trying to winter bees in the house by supplying such feed as I thought they needed. Those days are long since past, but not forgotten; neither are many of the men that figured in those days in the bee-world. A few of them still survive, for I see their names occasionally. But a majority of them have passed over—to the Better Land, I hope. For two things the good Lord permits me yet to have love—for him and for his creatures—bees among the rest.

W. S. VAN METER.

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A Season of Failure—Plants.

Our honey crop here is like a man hunting God's country, it is always a mile (year) ahead.

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for winter; unless they gather some from bitterweed, our winter loss will be heavy. My crop, this year, was about one-third. I saved 9 swarms and lost one that I know of. I don't know whether I shall feed much or not; I have had so many failures and disappointments that I don't care much if some do die.

Mr. Davenport is welcome to all the black bees in America. For my part, give me Italians all the time. The blacks work all right if honey is plentiful, but they nearly always go into winter quarters very light here.

I will send you 3 weeds, and would be glad if Prof. Walton will tell their names. The yellow is called bitterweed, and grows from 1 to 2 feet high; the white from 3 to 4 feet high; and the other from 6 to 7 feet high. Bees do not work on them all, but work on the white a little, and a good deal on the yellow. J. S. PATTON.

Hale Co., Ala., Oct. 5.

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anists as Helenium autumnale, or sneezeweed.

The white flower is tall thoroughwort, Eupatorium altissimum, and closely resembles the boneset.

The third flower is a wormwood—Artemisia candata.—C. L. WALTON.]

A Long Swarming Season.

Some 30 years ago I kept a few bees. After moving to the city I had none until 3 years ago, when, about the first of July, I caught a stray swarm on a theater sign. I had increased them last spring to 5 colonies. They commenced to swarm about the first of May, and kept at it until Sept. 1, when the last swarm of the season, a very large one, came out. On Aug. 26, I had two out, both very large.

I have taken off only 24 small sections of honey from the whole lot. I doubled up, and returned to their old hives enough so I only increased from 5 to 16 colonies, which I now have. Several colonies have not enough to winter on, and I am feeding them sugar syrup.

If I had hived each swarm that came out I would now have 23 colonies.

This knocks all my former experiences endwise. Of course, there is no money in such business.

I would like to know if any other subscriber for the Bee Journal has ever had such an experience. Can it be because of my surroundings, or because of peculiarities of the season?

HENRY A. STONE.

Kings Co., N. Y., Oct. 10.

A Report—Paralysis—Crossing Bees.

From 56 colonies, spring count, I increased to 81, and took off 1200 pounds of comb honey and 300 pounds of extracted. My bees took the second swarming fit the last of August, and continued up to Sept. 10. I put most of them back, but it cut down my honey crop.

The first part of this season was very wet and cold, and it was June 20 before any of the bees worked in the supers. The white sumac was good, but the basswood was cut short by cold, wet weather; there were three days when it was too cold for bees to fly.

I had 2 colonies that had paralysis; they would throw out ½ pint of bees every night, and through the day the ground in front of the hives would be covered with live bees. They both swarmed, and I hived the swarms on full combs. One of them never showed any signs of disease after that, and the parent colonies were soon rid of the disease, but one of the swarms still continued to have the disease; they were so reduced by the middle of September that I gave them the sulphur cure, by closing the entrance almost tight and then putting a handful of sulphur in the lighted smoker. I think a wet season causes more paralysis than a dry one. I have tried the sulphur cure, as Mr. Poppleton directs, and thought I had them cured, but the next spring it would make its appearance again.

I notice by the American Bee Journal that Mr. Frank Benton says that a cross between the Carniolan and the Italian or Cyprian are the best honey-gatherers. I agree with him. I had a

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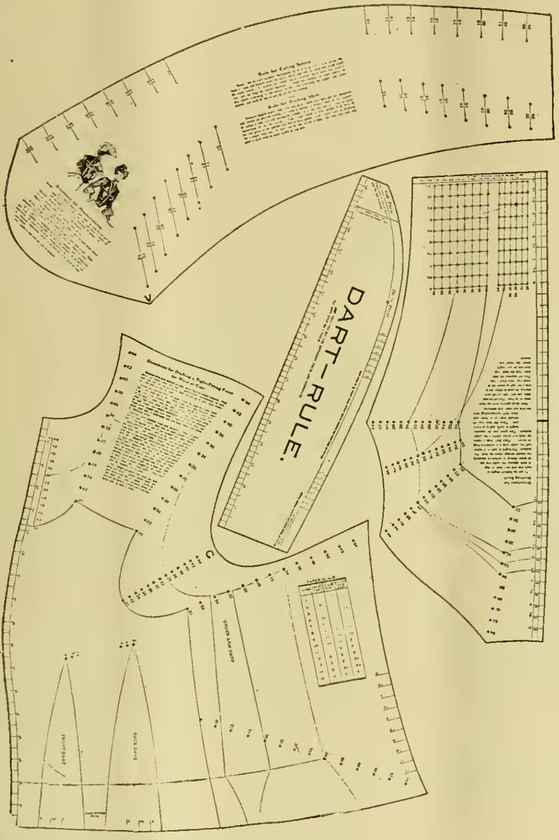
Something FOR OUR Bee-Keeping Sisters in the Winter Time.

We think all ladies will agree with us in saying that every man should at least understand some business, with which, in case of necessity, he could support himself and family. The wealthiest people frequently come to want, and wretched, indeed, is the man who cannot earn a living after his wealth is gone. He sometimes fills the grave of a suicide. And why, in this enlightened age of progression, should not woman, as well as man, be able to depend on her own resources? In case her husband dies in poverty, must she starve or depend on charity? In case her husband fails to provide and grossly mistreats the woman he has sworn to cherish, must she humbly submit? **A THOUSAND TIMES, NO!** Let every woman, before she marries, have some knowledge that can be used to make her a living. Every mother, rich or poor, should make her daughters, in a certain degree, independent, by giving them some kind of a trade, and teaching them to be self-reliant. Mothers should have their daughters learn to sew, and not neglect this important part of their domestic education. The daughter so taught will not only make a better wife and mother, but will also be more likely to secure a better husband, and will always command his respect. He will not look upon her as a helpless "know-nothing," but will know that if he fails in his duties, she can live without him, and this can only strengthen the bond between them. A thorough knowledge of dress-making can always be turned into gold, and become the means of support for the mother and her little ones. She may never have to use this knowledge in this way, but she has a trade and can use it if necessary.



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Carniolan that, after swarming, the young queen mated with an Italian, and it filled 5 supers every year for 3 years. I have 1 colony of Italians now, but I can not call them pure, that is 10 years old, and has never swarmed, and never stored less than from 50 to 100 pounds of surplus honey every year. I reared a queen from her, and it was the first to swarm the next year.

G. W. BELL.
Clearfield Co., Pa., Oct. 19.

Past Season Beats all Records.

As the honey season is closed I can make my report. The past season has beaten all records for several years past, for honey and swarms. All the methods taught by bee-men to prevent swarming have failed; at the same time the bees stored a nice lot of fine honey. I started the season with 30 good colonies, which increased to 55, and produced over 3000 pounds of comb honey. The most of my new colonies are made up of 2 and 3 swarms, and all are almost too heavy, at this date, for one man to handle.

I want to put on record the performance of 3 colonies belonging to a friend of mine living 3½ miles distant. These 3 colonies produced 33 full supers of 24 sections each, being an average of 264 pounds to a colony, in 8-frame hives. This beats all records for this part of the country, unless it might be that Dr. Gallup, who kept bees in this county a good many years ago, did better with his large hives. The owner of these bees, Mr. Fred Zilk, is a young farmer, who, besides managing a large farm, keeps about 20 colonies of bees, and takes care of them, notwithstanding, until the present time, he never subscribed for a bee-paper.

The hardest problem to solve now is, what to do with so many bees. Our honey has sold readily in the home market, but the bees we cannot sell at any price, and 30 colonies are all that I want to keep.

A. F. FOOTE.
Mitchell Co., Iowa, Oct. 22.

4-Inch Screw-Caps for Cans.

By all means let us have those 4-inch screw-caps, and also a good wrench to remove them.

WM. RUSSELL.
Hennepin Co., Minn.

A Lonesome Bee-Keeper.

The Bee Journal came to hand as promptly as usual; glad to see it, too. I did not find any answer to my questions yet, but did find Dr. Miller's humble apology, and it was accepted.

I found the cause of that peculiar odor, and am glad to say it was not foul brood, or any other of the many dreadful things I imagined, but pure and simple goldenrod or wild aster, or both.

I visited an apiary near Atlanta last week and found the same odor, but much stronger on account of larger number of hives in one place.

Commission merchants at Atlanta offered me 12½ to 13 cents for pound sections, and I felt very sorry I had 4 colonies instead of 400.

In reading the Bee Journal last night I got badly shocked, so much so that my heart went like a trip-hammer; it was all about a "a sisterly suggestion to a brother." I don't know whether the Bee Journal is running a matrimonial department or not, but I think it would be a good thing if it did. I am another one of that unlucky tribe of bachelors, and have to look after housework, breadmaking, bees and all, and I am getting almost sick of it, so Mrs. Henry's sly suggestion hit me rather hard. This state of single blessedness does not suit me any better than the bees. If you can help us out I'll let you dance at the wedding.

C. H. KOENTZ.

Cleburne Co., Ala., Oct. 24.

Perhaps a Mustard—Poor Yield.

I send some seed-pods of a weed that grows by the roadside about 3 miles from my place; it grows about 3 or 4 feet high, much branched, and has yellow flowers. It is about out of bloom now, so I cannot send a good specimen of the flower. I have seen a few bees working on it, but I am not certain whether for honey or pollen.

1. What is the name of this weed?
2. Is it a good honey-plant?
3. If so, is the honey light or dark?
4. Would my bees be likely to get benefit from it, being 3 miles away?

We have had a poor yield of honey in this locality this year; too cold and windy during fruit-bloom, and too wet all through May, so that the colonies did not get strong enough to put up any surplus honey from the first crop of alfalfa bloom, and the second and third crops were ruined by the web-worms, so that all the surplus I have is from the fall flowers, mostly heartsease, and not very much of that, only about 20 pounds per colony, in sections.

There are not many bees kept in this neighborhood; I have only 7 colonies; I am a beginner at the business, this being my second season.

E. S. WEBSTER.

Reno Co., Kansas, Oct. 20.

[I believe the plant in question belongs to the Mustard family, and it is one that has been recently introduced from the old country. It goes by the name of Neslia. I know nothing about its honey-producing quality, but do not think it of much value, and, besides, three miles is a long distance for bees to go after nectar.—C. L. WALTON.]

A Report—Queer Notions.

Last winter I had to feed my bees, and last spring I started with 18 colonies, which increased to 35, and gathered 1000 pounds of comb honey, all white clover. I sold it early, and averaged a little over 10 cents per pound.

This fall I have fed them 200 pounds of the best granulated sugar. I use the entrance feeders.

I like to take care of bees, the only trouble being that when they sting me they swell so.

I heard the other day that a number of farmers, living 6 and 7 miles north of here, and keeping from 2 to 12 colonies, have an idea that I have a peculiarly large strain of bees, twice the size of theirs, and very fierce; also that they fly away up there and rob their bees and carry home honey, bees and all.

My intention is to increase to 200 colonies.

V. A. HANSON.

Polk Co., Wis., Oct. 25.

BEE-BOOKS

SENT POSTPAID BY

GEORGE W. YORK & CO.,

144 & 146 E. Erie St., - CHICAGO, ILL

Forty Years Among the Bees, by Dr. C. C. Miller.—This book contains 328 pages, is bound in handsome cloth, with gold letters and design; it is printed on best book-paper, and illustrated with 112 beautiful original half-tone pictures, taken by Dr. Miller himself. It is unique in this regard. The first few pages are devoted to an interesting biographical sketch of Dr. Miller, telling how he happened to get into bee-keeping. Seventeen years ago he wrote a small book, called "A Year Among the Bees," but that little work has been out of print for a number of years. While some of the matter used in the former book is found in the new one, it all reads like a good new story of successful bee-keeping by one of the masters, and shows in minutest detail just how Dr. Miller does things with bees. Price, $1.00.

Bee-Keeper's Guide, or Manual of the Apiary, by Prof. A. J. Cook, of Pomona College, California. This book is not only instructive and helpful as a guide in bee-keeping, but is interesting and thoroughly practical and scientific. It contains a full delineation of the anatomy and physiology of bees. 544 pages. 295 illustrations. Bound in cloth. 19th thousand. Price, $1.20.

Langstroth on the Honey-Bee, revised by Dadant.—This classic in bee-culture has been entirely re-written, and is fully illustrated. It treats of everything relating to bees and bee-keeping. No apiarian library is complete without this standard work by Rev. L. L. Langstroth—the Father of American Bee-Culture. It has 520 pages, bound in cloth. Price, $1.20.

A B C of Bee-Culture, by A. I. & E. R. Root. — A cyclopedia of over 500 pages, describing everything pertaining to the care of the honey-bees. Contains about 400 engravings. It was written especially for beginners. Bound in cloth. Price, $1.20

Scientific Queen-Rearing, as Practically Applied, by G. M. Doolittle.—A method by which the very best of queen-bees are reared in perfect accord with Nature's way. Bound in cloth and illustrated. Price, $1.00; in leatherette binding, 60 cents.

Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—It is nicely illustrated, contains 160 pages. Price, in cloth, 75 cents; in paper, 50 cents.

Advanced Bee-Culture, Its Methods and Management, by W. Z. Hutchinson.—The author of this work is a practical and entertaining writer. You should read his book; 90 pages; bound in paper, and illustrated. Price, 50 cents.

Bienen-Kultur, by Thomas G. Newman. —This is a German translation of the principal portion of the book called "Bees and Honey." 100-page pamphlet. Price, 25 cents.

Apiary Register, by Thomas G. Newman.—Devotes two pages to a colony. Leather binding. Price, for 50 colonies, $1.00.

Dr. Howard's Book on Foul Brood. —Gives the McEvoy Treatment and reviews the experiments of others. Price, 25 cents.

Winter Problem in Bee-Keeping, by G. R. Pierce.—Result of 25 years' experience. Price, 30 cents.

Foul Brood Treatment, by Prof. F. R. Cheshire.—Its Cause and Prevention. 10 cts.

Foul Brood, by A. R. Kohnke.—Origin, Development and Cure. Price, 10 cents.

A New Bee-Keeper's Song—

"Buckwheat Cakes and Honey"

Words by EUGENE SECOR.
Music by GEORGE W. YORK.

This song was written specially for the Buffalo convention, and was sung there. It is written for organ or piano, as have been all the songs written for bee-keepers. Every home should have a copy of it, as well as a copy of

"THE HUM OF THE BEES in the APPLE-TREE BLOOM"

Written by
EUGENE SECOR and DR. C. C. MILLER.

PRICES—Either song will be mailed for 10 cents (stamps or silver), or both for only 15 cents. Or, for $1.00 *strictly in advance* payment of a year's subscription to the American Bee Journal, we will mail both of these songs free, *if asked for.*

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☞ The man who thinks, grows. Head-work is as essential to hand-work as it is to brain-work. No man's business or profession can rise higher than the thought he puts into it. Being up-to-date is good, but the man who thinks ahead of his competitors, gets the cream of the trade every time.—Jed Scarboro, in Printers' Ink.

DAIRYMEN ARE DELIGHTED to meet those who work for us. Cow keepers always have money. We start you in business. You make large profits. Easy work. We furnish capital. Send 10 cents for full line of samples and particulars.
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Please mention Bee Journal when writing

The Nickel Plate Road

will sell tickets within distances of 150 miles, Nov. 25 and 26, at rate of a fare and a third for the round-trip, account Thanksgiving Day. Return limit Nov. 30, 1903. Three through trains daily to Ft. Wayne, Cleveland, Erie, Buffalo, New York, Boston and New England points, carrying vestibuled sleeping-cars. No excess fare charged on any train on Nickel Plate Road. Meals served in Nickel Plate dining-cars on American Club Plan, ranging in price from 35c to $1.00; also a la carte. Chicago City Ticket Offices, 111 Adams St., and Auditorium Annex. 'Phone Central 2057. Depot, La Salle St. and Van Buren Sts., on the Elevated Loop.

"What Happened to Ted"

BY ISABELLE HORTON.

This is a true story of the poor and unfortunate in city life. Miss Horton, the author, is a deaconess whose experiences among the city poverty stricken are both interesting and sad. This particular short story—60 pages, 5x6¾ inches, bound in paper cover—gives somewhat of an insight into a little of the hard lot of the poor. Price, postpaid, only 10 cents (stamps or silver.) Address,

ISABELLE HORTON.
227 EAST OHIO STREET, CHICAGO, ILL.

CONVENTION NOTICES.

Chicago-Northwestern.—The regular annual meeting of the Chicago-Northwestern Bee-Keepers' Association will be held in the Revere House Club-Room, southeast corner of North Clark and Michigan Sts., on Wednesday and Thursday, Dec. 2 and 3, 1903. The Revere House has made a rate of 75 cents per person per night for lodging, when two occupy a room. Meals, 35 cents, or on the American plan at $2 per day. Owing to the Revere House furnishing FREE a place for holding our meeting, we feel that all who can do so should patronize them during the Convention. Dr. C. C. Miller, Ernest R. Root, W. Z. Hutchinson, Emerson T. Abbott, N. E. France, Inspector J. Q. Smith. Jas. A. Stone and Huber H. Root have signified their intention to be present. Pin this in your hat. There will be one of the best meetings ever held in Chicago. Everybody come.

HERMAN F. MOORE, Sec.
GEORGE W. YORK, Pres.

P. S.—It has been suggested that bee keepers bring with them samples of honey, and such little appliances as they have that are considered handy to work with in the apiary.

Colorado.—The 24th annual meeting of the Colorado State Bee-Keepers' Association will be held in the Chamber of Commerce Hall, Denver, Colo., Nov. 23, 24 and 25, 1903. An unusually fine program has been prepared. One of the features will be a display of hives, supers and frames manufactured in Colorado. The attendance of all Colorado bee-keepers is earnestly solicited. Write for program to

Boulder, Colo. H. C. MORKHOUSE, Sec.

Minnesota.—The Minnesota Bee-Keepers' Association will hold its annual meeting at Minneapolis, Minn., Wednesday and Thursday, Dec. 2 and 3, at the First Unitarian Church, on the corner of 8th St. and Mary Place (midway between Hennepin and Nicollet Aves.) Go in on the Mary Place side. Procure certificates from your local railroad agents when you purchase tickets, and those living in Minnesota can return for one-third fare, and we hope to secure the same for those living in Wisconsin, Iowa, and the Dakotas. DR. L. D. LEONARD, Sec.

WM. RUSSELL, Pres.

Missouri.—The Missouri State Bee-Keepers' Association will meet in Mexico, Mo., Dec. 15, 1903. J. W. Rouse will act as host to direct the attendants to the hall, which is free to all who desire to attend. Board may be had at the leading hotels at $1 to $2 a day. Come, everybody who is interested in bees and honey. Let us have a big meeting. We now have 51 paid-up members. Let us make it 100. Procure certificates from your local railroad ticket agents when you purchase your tickets. It may be you can return for ⅓ fare.

W. F. CARY, Sec. J. W. ROUSE, Pres.

Illinois.—The Illinois State Bee-Keepers' Association will meet at the State House, on Tuesday and Wednesday, Nov. 17 and 18, 1903. It has been so arranged that all who become members of the State Association on payment of an annual fee of $1.00 membership, will for the same be made a member of the National Association, and be entitled to all the combined reports of the State and Chicago-Northwestern Associations. Efforts will be made at our coming meeting to give also a membership in the Chicago-Northwestern for the same $1.00 fee, providing it can be so arranged.

Railroad fare has been promised on all the roads in the Central Division of one fare for the round trip, and a fare and a third on the others; but we still hope for one fare on the latter.

JAS. A. STONE, Sec.
Route 4, Springfield, Ill.

Handy Low-Down Wagons.—This is the season of the year, in the corn-growing sections, when the man with the low wagon has the advantage of his neighbor who uses the high wheel. One has only to drive through the country and witness the loading of fodder to be forcibly impressed with the labor that's saved in one field, and the energy that's needlessly wasted in the next. Another fact is equally patent, and that is, that there has been a remarkable increase in the number of the low-wheeled wagons in recent years. The low wheel has the better of the argument for all farm work. This has been proclaimed time and again as the result of competitive draft-tests, and is abundantly proven from the standpoint of convenience every day by the great army of users.

The Electric Wheel Company, of Quincy, Ill., has perhaps done more than any other institution to popularize the low-wheel and Handy Wagon. Their "Electric" Steel Wheel is the kind that is made to last. An item that has multiplied the number they are constantly sending out, is that they are made to fit the skein of any make of wagon. The wheels being the first to give away in the wooden-felloe high-wheel style of wagon, a great many farmers take advantage of this fact, and procuring the "Electric" wheels, convert their old wagons into Handy Wagons. In most cases the running-gears are good, and with little expense they secure a wagon as good as new, with all the conveniences which the use of the low-down Handy Wagon carries with it. If any reader of this find his old high wheels giving away, he will do well to send to the above Company for their catalog, and learn what their low steel wheel will do in the way of giving him practically a new wagon at but very slight cost. It must not be forgotten that the Company makes the Handy Wagon complete where parties desire it.

20,000 Pounds
White Alfalfa Honey for sale. Address
DR. GEO. D. MITCHELL & CO., Ogden, Utah.
46Atf Please mention the Bee Journal.

WANTED, COMB HONEY—We have an unlimited demand at the right price. Address, giving quantity, average weight per case, quality and price, properly crated, and delivered to your depot. **THOS. C. STANLEY & SON,**
MANZANOLA, COLO., OR FAIRFIELD, ILL.

WANTED—Extracted Honey.
Mail sample and state lowest price delivered Cincinnati. Will buy FANCY WHITE COMB HONEY, any quantity, but must be put up in no-drip shipping-cases.
C. H. W. WEBER,
2146-48 Central Ave., CINCINNATI, OHIO.
24Atf Please mention the Bee Journal.

FREE CHRISTMAS DINNERS
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200,000
Poor People
will be supplied by the Salvation Army throughout the U. S. Will you help by sending a donation, no matter how Small to the
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Army
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Headquarters
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Chicago, Ill.

HATCHING THE EARLY BIRD.

A YEARLY IMPROVEMENT IN PRICE AND MARKET FOR EARLY SPRING BROILERS.

It is coming to be more the case with each succeeding year, that the cream of poultry profit is obtained by hatching, raising and sending to market the chickens that have come to be comercially known as "broilers." This term includes, in a general way, birds that weigh from 1 to 2¼ pounds at an age of from two to four months. Of course, the highest prices are obtained during the early part of the season, say from March to May. For this reason fully 90 percent of poultrymen use the incubator exclusively, as it enables them to regulate the season and number of the hatch with entire independence of the hen, which need only furnish the eggs.

In the matter of incubators, they have been brought to a point where they actually beat the hen at her old game. Manufacturers have closely studied the natural laws of incubation, and followed them minutely. In the machines made by George H. Stahl, of Quincy, Ill., known as the Excelsior and the "Wooden Hen," every problem of heat, moisture and ventilation has been solved, and it is said they will hatch a greater percentage of hatchable eggs than the mother hen herself under ordinary conditions. Five minutes' daily attention when in operation is all they require. Every one interested in poultry should write George H. Stahl, Quincy, Ill., for his free catalog of Incubators and Poultry Appliances. It is worth having.

BOYS WE WANT WORKERS
Boys, Girls, old and young alike, make money working for us. We furnish capital to start you in business. Send us 10c stamps or silver for full instructions and a line of samples to work with. DRAPER PUBLISHING CO., Chicago, Ill.

HONEY AND BEESWAX

MARKET QUOTATIONS

CHICAGO, Nov. 7.—The supply of comb honey is large, and sales are being forced, so that it is a little difficult to give accurate figures. Sales are not easily made of fancy at anything over 13c per pound, with less desirable grades selling lower. Extracted, white, brings 6@7½c, according to kind, flavor and package; amber, 5½@6½c. Beeswax, 28@30c.

R. A. BURNETT & CO.

ALBANY, N. Y., Nov. 7.—Honey demand and price keeps up remarkably well yet. Fancy white, 16c: A No. 1, white, 15c; No. 1, 14½@15c; mixed, 13½@14c; buckwheat, 13½@14c. Extracted, dark, 6½c; mixed, 6½@7c; white, 7@7½c; but not as active as comb. Beeswax, 30c. H. R. WRIGHT.

CINCINNATI, Nov. 7—The demand for honey is a little better. The prices rule about the same. Extracted is sold as follows: Amber, in barrels, from 5¼@5½c; in cans about ½ cent more; water-white alfalfa, 6@6½ cents; white clover, 6¾@7½c. The comb honey market is quite lively, and it sells as follows: Fancy water-white, 14@15c .Beeswax in good demand, at 30c delivered here. C. H. W. WEBER.

BUFFALO, N. Y., Oct. 11.—The demand for white comb honey is better than it was. The trade is particular and wants only very white, clean stock. If the wax is yellow from travel-stain it does not sell well, and price has to be cut. Fancy white comb, 14@15c; A No. 1. 13½@14c; No. 1, 13@13½c; No. 2, 12@12½c; No. 3, 11@12c; No. 1 dark comb, 11@12c; No. 2, 10@11c. White extracted, 6½@7c; amber, 6@6½c; dark, 5½@6c. Beeswax, 28@30c.

W. C. TOWNSEND.

BOSTON, Oct. 8.—Comb honey continues to be in good demand. Fancy white honey in cartons we quote at 18c; No. 1, at 16c; glass-front cases fancy white, at 16c; No. 2, at 14c. Extracted honey, Florida, 6½@7½c, according to quality.

BLAKE, SCOTT & LEE.

KANSAS CITY, Oct. 23.—Receipts of comb honey good; demand good; market easier. Receipts of extracted light. We quote: Fancy white comb, 24 sections, per case, $3.00; No. 1, white and amber, $2.75; No. 2, $2.50. Extracted, white, 7c; amber, 5@6c. Beeswax, 25@30c.

C. C. CLEMONS & CO.

CINCINNATI, Oct. 1.—Comb and extracted honey are coming in freely, and the demand is good with steady prices. We are making sales at the following prices: Amber extracted at 5¾@6½c; white clover, 6½@7½c. Fancy comb honey, 15c. Beeswax, 30c.

THE FRED W. MUTH CO.

NEW YORK, Sept. 28.—Comb honey is arriving quite freely now, and is finding ready sale at 15 cents per pound for fancy white, 13@14c for No. 1 white, and 12c for No. 2 white and amber. Very little buckwheat on the market as yet, and prices are hardly established.

Extracted honey is ruling about the same as last with plenty of offerings of all grades.

Beeswax is somewhat declining and selling at present at from 28@29c per pound.

HILDRETH & SEGELKEN.

SAN FRANCISCO, Oct. 21.—White comb, 1-lb. frames, 13@14 cents; amber, 9@11c. Extracted, white, 5¾@6¼c; light amber, 5@5½c; amber, 4½@5c; dark amber, 4@4½c. Beeswax, good to choice, light, 27½@29c; dark, 25@26c.

Market is more quiet than for several weeks preceding, but is fairly steady as to value. Spot stocks and offerings of both comb and extracted are mainly of amber grades, while most urgent inquiry is principally for water-white, the latter being the only kind meeting with much competitive bidding from buyers. Recent arrivals of honey included a lot of 121 cases from the Hawaiian Islands. The bees of the Islands feed mainly on sugar.

WANTED! FANCY COMB HONEY
In no-drip shipping-cases. Also Amber Extracted in barrels or cans. Quote your best price delivered Cincinnati. The Fred W. Muth Co.
32Atf Front and Walnut, CINCINNATI, OHIO.

WANTED—Comb Honey in quantity lots. We are perhaps the only dealers in this article owning as much as 150,000 pounds at one time. Please state quantity, quality and price asked for your offerings, **Thos. C. Stanley & Son.**
24Atf MANZANOLA, COLO., OF FAIRFIELD, ILL.

The Best Bee-Goods in the World....

are no better than those we make, and the chances are that they are not so good. If you buy of us **you will not be disappointed. We are undersold by no one.** Send for new catalog and price-list and free copy of THE AMERICAN BEE-KEEPER; in its thirteenth year; 50 cents a year; especially for beginners.

—THE—

W. T. Falconer Mfg. Co.,
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W. M. GERRISH, Epping, N.H., carries a full line of our goods at catalog prices. Order of him and save the freight.

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If you want the Bee-Book

That covers the whole Apicultural Field more completely than any other published, send $1.20 to

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Liberal Discounts to the Trade.

Hives, Sections, Foundation,

etc. We can save you money. Send list of goods wanted and let us quote you prices. ROOT'S GOODS ONLY. Send for Catalog.

M. H. HUNT & SON, Bell Branch, Mich.

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$300,000,000.00 A YEAR

and you may have part of it if you work for us. Uncle Sam's poultry product pays that sum. Send 10c for samples and particulars. We furnish capital to start you in business. **Draper Publishing Co., Chicago, Ill.**

HONEY=JARS.

I can sell you a White Glass Honey-Jar, holding 15 ounces of honey, at $4 00 per gross. Also the standard square one-pound Jar at $4.50 per gross. Sample of either Jar by mail on receipt of 10 cents for postage.

J. H. M. COOK, Bee-Keepers' Supplies
62 Cortlandt St., NEW YORK CITY.

41Atf Please mention the Bee Journal.

Paw Paw Seed

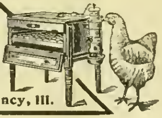
for fall planting. Package 10 cents; three for a quarter. Send silver, at our risk. Beautiful trees; delicious fruit.

Rocky Beach Orphanage,
46A1t LANSING MICH.

$12.80 For 200 Egg INCUBATOR

Perfect in construction and action. Hatches every fertile egg. Write for catalog to-day.

GEO. H. STAHL, Quincy, Ill.



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Reduced Prices.

☞ Good for the balance of this season only.

As I desire to unite my nuclei as soon as possible, I will sell Queens at the following low prices, until my present supply is exhausted. Untested Queens, 60c each; 6 or more, 50c each. Select Untested, 75c each; 6 or more, 60c each. Tested, $1.00 each. Select tested, $1.50.

Safe arrival and satisfaction guaranteed. Queens sent by return mail unless otherwise directed.

J. P. Moore, L. Box 1, Morgan, Ky.
45Atf Pendleton Co.

26th Year **Dadant's Foundation** 26th Year

We guarantee Satisfaction. What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING. No LOSS. PATENT WEED-PROCESS SHEETING.

Why does it sell so well? Because it has always given better satisfaction than any other. Because in 25 years there have not been any complaints, but thousands of compliments.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

Bee-Keepers' Supplies OF ALL KINDS *****

Very fine pure-bred BARRED PLYMOUTH ROCK Chickens and Eggs for sale at very low prices.

Langstroth on the Honey-Bee—Revised,
The classic in Bee-Culture—Price, $1.20, by mail.

BEESWAX WANTED at all times.

DADANT & SON,
Hamilton, Hancock Co., Ill

Please mention Bee Journal when writing.

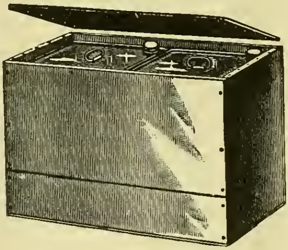
BEST

Extracted Honey For Sale!

ALL IN 60-POUND TIN CANS.

Alfalfa Honey

This is the famous White Extracted Honey gathered in the great Alfalfa regions of the Central West. It is a splendid honey, and nearly everybody who cares to eat honey at all can't get enough of the Alfalfa extracted.



Basswood Honey

This is the well-known light-colored honey gathered from the rich, nectar-laden basswood blossoms. It has a stronger flavor than Alfalfa, and is preferred by those who like a distinct flavor in their honey.

Our honey is put up in tin cans holding 60 pounds of honey each. These cans are shipped in wooden-boxes, and should arrive safely. We have nothing but PURE BEES' HONEY to offer, and so guarantee it. Cash must accompany each order. All prices are f.o.b. Chicago.

Prices of Alfalfa Honey:

One 60-lb. Can @8c..............$ 4.80
Two 60-lb. Cans (in 1 box) @7½c 9.00
(Larger quantities at the 7½c price)

Prices of Basswood Honey:

One 60-lb. Can @9c..............$ 5.40
Two 60-lb. Cans (in 1 box) @8c.... 9.60
(Larger quantities at the 8c price.)

A sample of either Alfalfa or Basswood honey will be mailed on receipt of 10 cents; samples of both kinds for 16 cents. (Stamps accepted.)

BEESWAX WANTED—We are paying 28 cents cash or 30 cents in trade for pure average beeswax delivered in Chicago (or Medina, Ohio.

HONEY-JARS—Don't forget to get our prices on all sorts of honey-packages.

THE A. I. ROOT COMPANY,
Successors to GEORGE W. YORK & CO.,
144 East Erie Street, - CHICAGO, ILL.

The Chicago-Northwestern Convention—Dec. 2 and 3, 1903

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WEEKLY

WALTER S. POUDER.
(See page 741.)

THE AMERICAN BEE JOURNAL

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GEORGE W. YORK.

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IMPORTANT NOTICES.

The Subscription Price of this Journal is $1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

The Wrapper-Label Date of this paper indicates the end of the month to which your subscription is paid. For instance, "dec03" on your label shows that it is paid to the end of December, 1903.

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National Bee-Keepers' Association

Objects of the Association:

1st.—To promote the interests of its members.
2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

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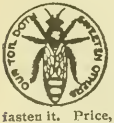
A Celluloid Queen-Button is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-lapel. It often serves to introduce the subject of honey, and frequently leads to a sale.



The picture shown herewith is a reproduction of a motto queen-button that we are furnishing to bee-keepers. It has a pin on the underside to fasten it. Price, by mail, 6 cents; two for 10c; or 6 for 25 cents. Send all orders to the office of the American Bee Journal.

Some Good Clubbing Offers.

As this is the time of year when most subscribers renew their subscriptions, we wish to call special attention to the following, which we are sure will commend themselves to all:

No. 1—	The Bee Journal and Dr. Miller's "Forty Years Among the Bees" (book alone, $1.00)	Both for $1.75
No. 2—	The Bee Journal a year and Prof. Cook's "Bee-Keeper's Guide," (book alone, $1.20)	" 2.00
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No. 4—	The Bee Journal a year and Doolittle's "Scientific Queen-Rearing," (cloth bound) (book alone, $1.00)	" 1.75
No. 5—	The Bee Journal a year and Doolittle's "Scientific Queen-Rearing," (leatherette bound) (book alone, 75c)	" 1.50
No. 6—	Bee Journal a year and Standard Untested Italian Queen (mailed in May or June, 1904) (Queen alone 75c)	" 1.50
No. 7—	The Bee Journal a year and a "Novelty Pocket-Knife" with your name and address on it (knife alone, $1.25)	" 2.00
No. 8—	The Bee Journal a year and a "Wood Binder," for holding a year's numbers (binder alone, 20c)	" 1.00
No. 9—	The Bee Journal a year and an "Emerson Binder," (stiff board) (binder alone, 60c)	" 1.40
No. 10—	The Bee Journal a year and a Monette "Queen-Clipping Device," (device alone, 25c)	" 1.00
No. 11—	The Bee Journal a year and Newman's "Bees and Honey," (cloth bound) (book alone, 75c)	" 1.50
No. 12—	The Bee Journal a year and Newman's "Bees and Honey," (paper bound)	" 1.10
No. 13—	The Bee Journal a year and Root's "A B C of Bee-Culture," (book alone, $1.20)	" 2.00
No. 14—	The Bee Journal a year and a Foster Stylographic Pen (Pen alone, $1.00)	" 1.75

Send all orders to GEORGE W. YORK & CO.,
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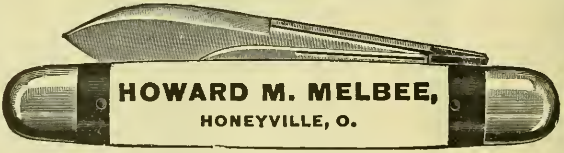
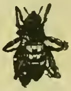
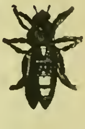
The Novelty Pocket-Knife.

Your Name and Address on one side—Three Bees on the other side.



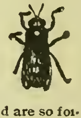


[This Cut is the Full Size of the Knife.]



Your Name on the Knife.—When ordering, be sure to say **just what name** and address you wish put on the Knife.

The Novelty Knife is indeed a novelty. **The novelty lies in the handle.** It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the subscriber, and on the other side pictures of a Queen, Drone, and Worker, as shown here.



The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a last-time, with proper usage.

Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the "Novelty" is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the "Novelties," your Pocket-Knife will serve as an identifier; and in case of death, your relatives will at once be notified of the accident.

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The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid for $1.25, or give it as a Premium to the one sending us Three New Subscribers to the Bee Journal (with $3.00.) We will club the Novelty Knife and the Bee Journal for one year, both for $2.00.

GEORGE W. YORK & CO. Chicago, Ill.

☞ Please allow about two weeks for your knife order to be filled.

AMERICAN
ESTABLISHT IN 1861
THE OLDEST BEE-PAPER IN AMERICA
BEE JOURNAL

43d YEAR. CHICAGO, ILL., NOV. 19, 1903. No. 47.

Editorial Comments

Don't Feed Syrup Now.

If you have been wise you will not be feeding anything now; the time for that was earlier; but if you have been improvident enough to leave some colonies till now with insufficient stores, let the deficiency be supplied with combs of sealed honey or with candy. Don't think of feeding syrup now.

The Varying Value of Honey-Plants.

This is one of the curious things in bee-keeping. It is well known that alfalfa is one of the most valuable honey-plants in Colorado and other Western regions, while, until lately, there has been no report of honey gathered from alfalfa east of the Mississippi. Now hopes are entertained that by means of inoculating the soil with the proper bacteria, alfalfa may flourish in localities where hitherto it has been a failure, and that in such places it may become valuable as a honey-plant. But what will account for the widely differing values of the goldenrods and asters? Surely, there can hardly be lacking some bacterium in the soil of northern Illinois, where several varieties of these plants grow luxuriantly and abundantly, yet they are reported worthless as honey-plants. Why worthless here and excellent elsewhere?

The Use of the Uncapping-Knife.

An old bee-keeper writes:

"What T. F. Bingham says, on page 712, about the use of the honey-knife, is worth all the long discussion about it in the Los Angeles report; but can it be possible that there is anything like 195 pounds pressure on the knife? It doesn't seem to need a strength of many pounds to move the knife."

Mr. Bingham is attributing to the pressure of the atmosphere what really should be attributed to the viscidity of the honey. The atmosphere is 15 pounds to the square inch, but that cuts no figure; the pressure is there on both sides alike, even if one side is immersed in honey. Try the flat side of the knife on a comb of very cold, thick honey, and then try it on one of warm, thin honey. The pressure of the atmosphere is the same in each case, but the knife will move with much greater difficulty in the case of the cold honey, because of its greater toughness.

This, however, does not take anything away from Mr. Bingham's argument in favor of having the ¼-inch bevel rather than the 1¼-inch blade next the honey. For the blade being five times as wide as the bevel, it will take five times the force to overcome the friction, so to speak, of the honey.

Selling Small Crops of Honey.

Recently we received an inquiry from a bee-keeper who had only about a ton of extracted honey, asking where he could sell it, and also what it was worth.

As to its value, of course we referred him to the market column the American Bee Journal. Any one who gets this journal regularly would hardly need to write to us to know the market price of honey. That is what the honey quotations are published for.

Now, about where to sell honey. In the particular case referred to, we suggested that as he had only a small amount of honey to dispose of, we believed he could realize the most for it by working up a home market, or in near-by towns. If he should ship his honey to a large city market he would likely get about 6 cents per pound for it. If he put forth some effort, by offering it direct to families in say 6 or 8 pound pails or cans, he would doubtless get at least 10 cents a pound for it, if not more.

We would like to see bee-keepers get more for their fine honey, but in order to do so, a great many more of them will have to work up their own market. Of course, the bee-keeper who has a number of tons of honey can not usually dispose of it in a home market. Such will have to ship it to the larger city market. But there are thousands of small cities and towns that do not use a tenth of the honey they should use, and would use, if they were offered the honey direct by the producer.

We believe this matter will bear investigation and development. We would like to hear from those who have made a success of the home-marketing plan.

Prices and Profits in Bee-Keeping.

The following is a sample of some of the correspondence that has come to this office lately and within the past few years:

> MR. YORK:—I believe the common bee-keeper is the milk-cow of the big bee-supply factories, and the commission houses of the big cities. I can see no profit in bee-keeping. And it looks to me funny when factories advertise in the bee-papers that the bee-keeper should borrow money and send it to the factory to get the goods early. Those people like to get all the money out of the bee-keepers, and let the latter have only the bee-stings in the summer-time.
>
> I believe there is a great, big humbug in comb foundation. It will stand the heat of an ice-box but not the heat of a hive full of bees. It must be more than half profit. Of course, there is more profit in that kind of foundation. I wouldn't use any foundation without wiring the frames. BAPTIST BECK.

Being entirely out of the bee-supply business now, we feel that we can offer a few comments on Mr. Beck's letter without being accused of having "an ax to grind."

In the first place, we learned enough about the bee-supply business, while we *were* in it, to know that there is no fortune in it for any one, be he manufacturer or dealer. Why, if the profits in making and handling bee-supplies were equal to those in many other lines, bee-keepers would be compelled to pay about double the present retail prices for the supplies they use in their apiaries. We feel that we know something about this matter, for we are in a city where there is a great variety of business done, and we know that the profits in a number of other lines of trade are far in excess of those connected with handling bee-supplies and honey.

As to the intimation of Mr. Beck, that comb foundation is adulterated, we can only say that the bulk of the comb foundation sold to-day is made by the Weed process, and the fact is that the sheeting method of that process will not work adulterated wax. So that idea of Mr. Beck is entirely wrong. Almost any bee-keeper knows that on a very hot summer day, with a heavy swarm of bees in a hive not ventilated, any kind of comb foundation will likely melt down if not wired in the frames.

As to there being no profit in the bee-business at the present price of honey, we suppose that can also be said of any other farm products at different times during a series of years. But we venture to say that there are a good many bee-keepers that would never complain at all, only guarantee them a fair crop of honey every year. They will take care of the price.

The fact is, there has never been a general oversupply of honey in this country. There may often be more produced in any one locality than can be used there during the year; but there are always many other places where not nearly enough has been produced to supply the demand. What should be done is to even up the surplus crop—distribute it more evenly throughout the country. Then a better price could be secured.

Honey will not usually sell itself, any more than it will take unto itself legs and walk off. The honey-producer must make some effort to dispose of his crop. But he must first see to it that it is put up in the best possible shape for market. Properly graded, neat and clean. He then needs to watch the markets—learn the supply and demand, as far as possible.

In our experience as a bee-supply dealer, we have not found the bright, pushing, up-to-date bee-keepers objecting to the ruling prices on bee-supplies. We have come in contact with a great variety of bee-keepers, too, in what was our bee-supply department. No one hears of a Coggshall, a Dr. Miller, a France, a Brodbeck, or any other large bee-keepers complaining of high prices of bee-supplies. They have done business enough to know that when the expenses connected with manufacturing and handling bee-supplies are considered, the present prices are none too high. But, actually, there are a few bee-keepers who think $1.00 is a high price for 52 copies of the American Bee Journal! But we doubt if any one can afford to keep bees at all, if he can not afford to pay a dollar for a bee-paper.

As to the suggestion that bee-keepers borrow money and buy supplies in the fall, that is all right. It would in some cases be a saving to the bee-keeper to do that. And for so doing, an early-order discount is offered by some manufacturers. But, of course, no one need borrow money or buy supplies in the fall just because some bee-supply manufacturer suggests that he do so.

In conclusion, we want to say that we don't know of any bee-supply dealer or honey-dealer who is getting rich in either business. Neither do we know of any honey-producer that is getting rich. Bee-keeping is not a get-rich-at-it business; neither is the bee-supply business, nor the bee-journal business. But all are businesses in which a fair, honest living can be made by hard work, and by "keeping everlastingly at it."

Queens or Laying Workers.

A Kansas correspondent wrote inquiring as to the value of a queen which, upon beginning to lay, laid a number of eggs in a cell, only occasionally having a single egg in a cell; but within 24 hours another letter came, saying:

> "I have looked into that hive again, and conclude that the queen is missing, and that laying workers are laying the eggs. What made me think at first that it was not laying workers, was that every cell contained one egg or more; that there were no vacant cells, but the eggs are fastened to the pollen in partly filled pollen-cells. It beats anything I have ever read about for laying workers; there must be many of them, or they are very prolific in egg-laying."

It may be said in general that a good queen will lay one egg in a cell, only duplicating the eggs when cramped for room. Yet there are rare exceptions, a good queen at first laying more than one egg in a cell, even when there are plenty of vacant cells. There is nothing strange about the large numbers of eggs laid by laying workers, for there is not, as some seem to think, only one laying worker in a hive, but a number, if not a majority, of the denizens of the hive are engaged at the miserable business.

There are cases in which it is impossible to diagnose certainly the presence of laying workers, at least until the brood is sealed, for the eggs will be laid just as regularly as if laid by the best queen. This, however, is probably never the case except where there is only worker-comb in the hive; for if drone-cells are present the laying workers prefer them, and will lay a large number of eggs in each drone-cell—sometimes a dozen in each—rather than to put up with the cramped quarters of a worker-cell. Generally, however, one or several queen-cells will be found well filled with eggs by laying workers. When eggs are found only in queen-cells, it is safe to say laying workers are the culprits.

It is also pretty safe to say there are laying workers if an egg is found laid on pollen, although, very rarely, a good queen may do such a foolish thing. When the brood is sealed, then all doubt as to the presence of a good queen is removed, for the sealing, instead of being flat, looks like a lot of little marbles, showing that there are laying workers or a drone-laying queen.

Automobiles for Bee-Keepers and Their Cost.

This is a matter concerning which there is some interest, and A. I. Root gives some figures in Gleanings in Bee-Culture. He copies the following from the Cleveland Leader:

> "William Huston, who recently made an 8000-mile trip through the East in his automobile, to-day figured out the cost of keeping his machine in repair during such steady and hard service. He finds that the mere cost of operating his automobile was 10 cents a mile, divided as follows: Tire maintenance, 5 cents a mile; gasoline, 2 cents a mile; general repairs, 3 cents a mile."

This would be rather expensive for bee-keepers, but Mr. Root thinks it unnecessarily high, probably being for a large machine costing $1500 or $2000 instead of $600 or $700. His own experience makes him estimate: Tires, 1½; gasoline, ½; repairs, 1 cent a mile, or 2 cents a mile in all. Bee-keepers, who are dreaming of some day owning an automobile, will be anxious to put faith in the figures of Mr. Root, rather than in those of Mr. Huston.

Comparing this with the expense of using horse-flesh, Mr. Root bases his estimate on the charges made by liverymen, and thinks 10 cents a mile none too high for a horse and buggy. Some bee-keepers will smile at the thought of its costing them 10 cents a mile for old Dobbin and the wagon. Perhaps some one will give us an estimate of the actual cost for his team in visiting out-apiaries.

Smoking Bees at the Hive-Entrance.

Renewed attention is called to this matter by the wide variance of opinion expressed by two bee-keeping editors. The Editor of Gleanings says that even in the case of a very cross colony he seldom blows smoke in at the entrance. The Editor of Barnum's Midland Farmer says: "Smoke first, several minutes before taking the cover off; this will give them a chance to fill up with honey."

Is it locality, the character of the bees, or what is it that will justify such opposite treatment? Are none of Mr. Root's cross bees ever found near the entrance, and are Mr. Barnum's bees so savage that it is not safe to open a hive without first pouring smoke into the entrance for several minutes? In the case of the average bee-keeper, the choice between the two ways would probably be a choice between stings and loss of time. The amateur, with only one or two colonies, would probably prefer to lose the "several minutes" rather than to run the chance of the stings. The practical bee-keeper, with 50 or more colonies to open in a day, would hesitate at the loss of time. "Several minutes" would be at least three minutes to each colony, and for 50 colonies that would make two hours and a half, to say nothing of blowing the bees out of the hive with so much smoke. Perhaps the two gentlemen might get together and make some kind of a compromise.

Miscellaneous Items

General Manager France wrote us Nov. 10, saying that the National Association had just won two more victories—one in San Antonio, Tex., where complaints were made against a bee-keeper by neighbors; and another in New Jersey, where honey-thieves were caught, plead guilty, and settled.

Ohio Bee-Keepers to Organize.—In Gleanings in Bee-Culture for Nov. 1, appeared the following editorial paragraphs:

> There is to be a joint meeting of the Hamilton County Bee-Keepers' Association with the Ohio State Bee-Keepers' Association, at Cincinnati Nov. 25, in the convention hall of the Grand Hotel. The Hamilton County Bee-Keepers' Association, as I have already mentioned, is a very lively organization; indeed, I believe it is the most flourishing body of bee-keepers that ever existed in Ohio. It has regular monthly meetings, and the enthusiasm seems to keep up to the boiling-point. Well, its members are thoroughly aroused as to the necessity of having a foul-brood law in Ohio, and they desire to co-operate with their brethren all over the State in asking our next General Assembly to pass such a measure. The old Ohio State organization held its last meeting in Cleveland, if I mistake not. The secretary, Miss Dema Bennett, just before she died, turned over to me the

records and other properties of the old Ohio State organization. The time now seems to be ripe for reorganizing it, and holding a meeting in Cincinnati, for we are bound to have a good local attendance and an enthusiastic meeting. Bee-keepers all over the State are asked to lend their influence, for it is proposed to bombard the Ohio State Legislature with a goodly company of bee-keepers, possibly holding one meeting in Columbus while the legislature is in session. The date of the convention, Nov. 25, the day before Thanksgiving, will insure low railroad rates; and you may rest assured that the bee-keepers of Cincinnati will do the handsome thing in their part of the work.

It is highly important that every bee-keeper in the State should petition his own Senator and Representative. Soon after this journal is out the election will be over, and you will know who your next law-makers will be. Possibly you will know before. In any case, see them as soon as possible, and secure from them a pledge of support. *This is very important*, for it is essential that *every* member of the General Assembly be approached by one or more bee-keepers; for when our measure comes up they will feel that the law is urgently needed. We must make them feel the *pressure*. Put in your best efforts now before you forget it. If you can't see your man, write him.

The meeting at Cincinnati will not be devoted entirely to the discussion of foul brood. Other subjects will be discussed, and among other things will be a stereopticon talk in the evening.

LATER.—I have just learned that D. R. Herrick, a Republican nominee for the legislature, and who has signified his willingness to father and support a foul-brood bill, will be present to address the convention. As he will probably be elected, this means much to us.

We hope that Ohio bee-keepers will turn out in goodly number at Cincinnati Nov. 25. Practically all will be able to get home again before the Thanksgiving dinner gets cold. Ohio needs a strong State organization of bee-keepers. Cincinnati is just the place to start it off. There are a lot of live, energetic bee-folks down there, that can do anything they really want to do. We shall expect great things from them. Being an "Ohio boy" we naturally look to our native State to be the foremost in all good movements.

* * *

Bees in a Chicago Hotel.—The following account of a hotel guest with bees appeared in the Chicago Tribune of Nov. 4:

> Busy, buzzing bees stampeded guests and employees at the Palmer House yesterday afternoon. Escaping from a suit-case, in which they were being conveyed to Iowa, they flew through corridors and lobby, stinging a number of patrons.
>
> Clerk Vier, at the counter, noticed two or three insects buzzing about his head.
>
> "Shoo!" he exclaimed, slapping at them.
>
> Just then Edward Tiedt, of Indiana, appeared on the scene. He was excited.
>
> "Have you seen any bees around here?" he asked, and then, as he perceived the insects, tried to round them up with a piece of gauze netting.
>
> "They are high-priced bees," he declared. "I was taking them to my farm in Iowa. I'll give $1.00 for every one that is captured."
>
> Bell-boys became busy, but not busier than the bees, and guests fled from the rotunda. Some sought the bar, and the bees followed. Two made directly for a Scotch high-ball, and were killed with a towel.
>
> A young woman telegraph operator sought refuge in a telephone booth, but she didn't stay long, for a bee had entered before her and resented the intrusion.
>
> Mr. Tiedt had intended starting an apiary on his Iowa farm, and the bees were in a small box that was in his suit-case.

* * *

A Large "Portico Hive."—A. G. Erickson, of Barry Co., Mo., wrote us, Nov. 9, as follows:

> EDITOR YORK:—I send you a newspaper clipping to show that bees can work as well in large places, or large hives, as they can in small ones.
> A. G. ERICKSON.

The clipping referred to in the foregoing is as follows:

> BEES WERE GOOD TO THIS OAK GROVE MAN.
>
> Two swarms of bees took possession of a cavity in a portico at the home of Dudley Owings, a farmer near Oak Grove, last summer. They were not molested until a few days ago, when Mr. Owings "robbed" them, and secured more than 200 pounds of fine honey. This is a fine output for one season. As honey is worth 16 cents a pound, the two colonies of bees netted Mr. Owings $32.

* * *

Lizards and Insects that Fool Bees.—"There is a kind of lizard which lives in the sandy deserts of Arabia," says the Sunday School Times. "Its body is so like the sand that it can not be distinguished from it at a little distance, but it has on each side of the mouth a fold of skin of a very light crimson color, which the creature can blow out into the form of a round blossom, and in this state it looks exactly like a little red flower which grows abundantly in the sand. Insects are attracted to this curious object, mistaking it for a real flower that has honey in it for them, and they approach the mouth of the lizard without fear, when they are immediately snapped up.

"There is also an insect common in India which feeds upon other insects, and, in order to catch them, puts on the appearance of the flower of an orchid. Its legs are made flatter and broader than those of any other insect; they are colored a beautiful pink hue, and they ray out from the body of the insect exactly like the petals of a beautiful flower. Insects are deceived by this wonderful likeness to the blossoms which they frequent for the sake of their honey, and are immediately caught up by their treacherous foe."

Sketches of Beedomites

WALTER S. POUDER.

The subject of our "sketch" this week was born Dec. 2, 1860. He was reared on a fruit-farm in Hamilton Co., Ohio, and took a liking to the bee-business during his college days. He established a queen-rearing business, but after advertising for some years, succeeded in disposing of his entire product of queens to the late Chas. F. Muth.

Mr. Pouder was one of the helpers in the factory of The A. I. Root Co. for a short time during 1883. He opened a small honey and supply house in Indianapolis, in 1889. With his nephew (now Dr. H. C. Cragg) for a helper, they made the business grow by being economical, both of them "batching." The stock of goods then consisted of a set of scales, a barrel of honey, and 20 colonies of bees!

Mr. Pouder was the author of a pamphlet called "The Busy Bees and How to Manage Them," which helped many a beginner in bee-keeping.

To-day Mr. Pouder has an immense stock of honey, beeswax and bee-supplies, without a single dollar of indebtedness.

He is unmarried, and for two years has been unfortunate about his hearing, thus debarring him from taking active part in social or church work.

Mr. Pouder has been one of the American Bee Journal's continuous advertisers for years. And no one exceeds him in promptness in paying bills. He is one of the reliable kind of young business men that are succeeding because of their honorable dealing and energetic endeavors. We feel like giving such a boost whenever we can, though they are usually the kind that have already boosted themselves into success by their own efforts.

We believe we have not met Mr. Pouder since the convention of the National which he refers to on another page—in 1886. And we have entirely forgotten that street-car remark, though we don't doubt that we said it. We had been married just a few weeks before that meeting. Sorry Mr. Pouder has not as yet followed our good example in that line. But it isn't too late yet.

Honey as a Health-Food is the name of a 16-page leaflet (3½x6 inches) which is designed to help increase the demand and sale of honey. The first part is devoted to a consideration of "Honey as Food," written by Dr. C. C. Miller. The last part contains "Honey-Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by every one who has honey for sale. It is almost certain to make good customers for honey. We know, for we are using it ourselves.

PRICES, prepaid—Sample copy free; 10 for 20 cts.; 25 for 40 cts.; 50 for 70 cts.; 100 for $1.25; 250 for $2.25; 500 for $4.00; 1000 for $7.50. Your business card printed free at the bottom of the front page, on all orders for 100 or more copies. Send all orders to the Bee Journal office.

Our Wood Binder (or Holder) is made to take all the copies of the American Bee Journal for a year. It is sent by mail for 20 cents. Full directions accompany. The Bee Journals can be inserted as soon as they are received, and thus preserved for future reference. Upon receipt of $1.00 for your Bee Journal subscription *a full year in advance*, we will mail you a Wood Binder free—if you will mention it.

Convention Proceedings

THE LOS ANGELES CONVENTION.

Report of the Proceedings of the 34th Annual Meeting of the National Bee-Keepers' Association, Held at Los Angeles, Calif., Aug. 18, 19 and 20, 1903.

(Continued from page 727.)

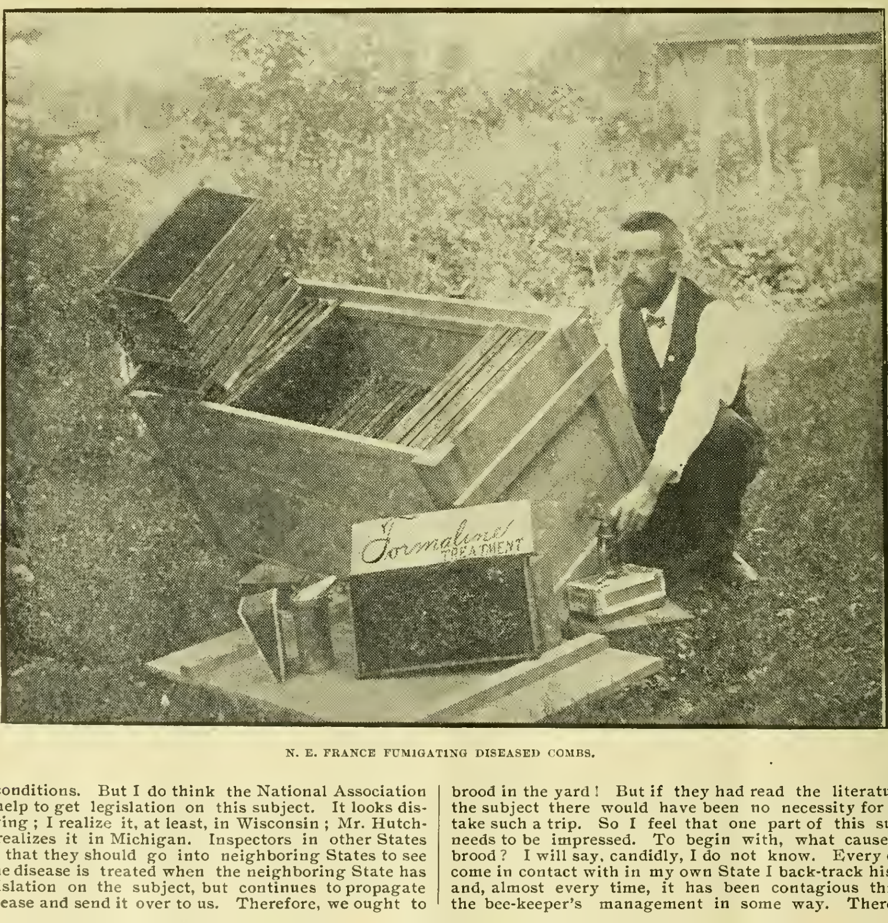
THIRD DAY—Thursday Morning Session.

This session opened with Pres. Hutchinson in the chair. Prayer was offered by Dr. Miller.

Mr. N. E. France then addressed the convention on

THE ERADICATION OF FOUL BROOD.

This subject of foul brood is one that has been discussed through our papers over and over again, and the appearance of the disease, together with its serious effects, has been described repeatedly, until it seems almost useless to rehash these conditions. But I do think the National Association could help to get legislation on this subject. It looks discouraging; I realize it, at least, in Wisconsin; Mr. Hutchinson realizes it in Michigan. Inspectors in other States realize that they should go into neighboring States to see that the disease is treated when the neighboring State has no legislation on the subject, but continues to propagate the disease and send it over to us. Therefore, we ought to have some remedy by which we could legislate to make these movements all National in their character. I hope the day is coming when the helping hand of the National Association can reach out and help sister States to get this legislation. During the little time I have been acting as General Manager, I have realized the necessity of this important part of the work.

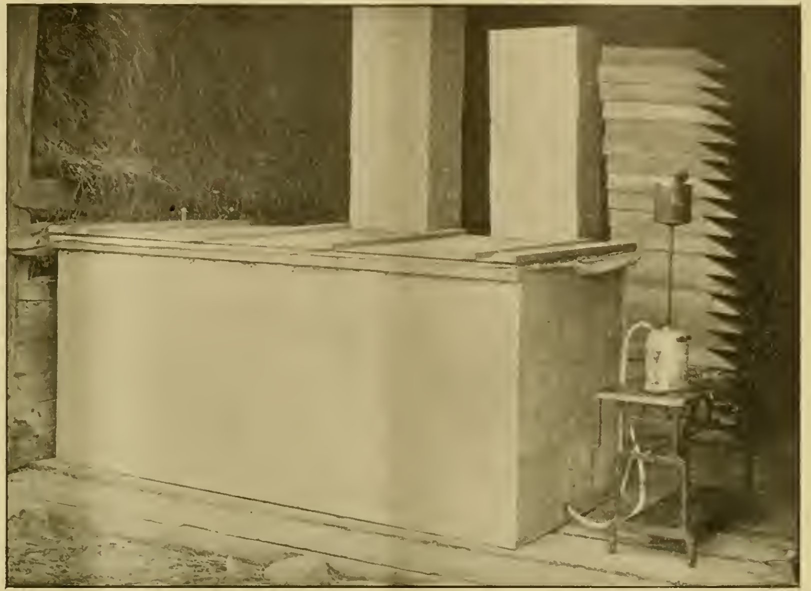


N. E. FRANCE FUMIGATING DISEASED COMBS.

But to come to the individual work of foul brood, I find bee-keepers in my own State (I will not say this of others) who are readers of two, some of them of three, bee-papers, and who are practical bee-keepers, and are up to date; but when you come to converse upon the subject of foul brood with these parties, they say they have not had experience, they have not posted themselves upon this branch of the business. When it gets into their yard it gets a good foothold before they become interested. Then they begin to go over their literature and look up the subject, having failed, unfortunately, to put the information into their heads, in which case they would have recognized the disease when it made its first appearance, and the serious results which followed might have been avoided. To know it at the first glimpse is very important; to know what to do with it comes later on.

Foul brood has been described over and over again, and I hardly know whether it is worth while to take the valuable time of this convention to go into that here, whether it is desirable to describe it so as to know it without any guessing. I have been called 300 miles to see a case of pickled brood, when they insisted they had foul brood in the yard, and how glad I was to tell them there was no foul brood in the yard! But if they had read the literature on the subject there would have been no necessity for me to take such a trip. So I feel that one part of this subject needs to be impressed. To begin with, what causes foul brood? I will say, candidly, I do not know. Every case I come in contact with in my own State I back-track history, and, almost every time, it has been contagious through the bee-keeper's management in some way. There has been a cause of it in that apiary, but what the original cause was I do not know. In certain cases it might have originated there, but that would not be a standard rule.

How do we spread it? Why, in as many ways as the bee-keeper knows of. I need not enumerate them. Sometimes by getting combs from somebody who has the misfortune to have the disease in his apiary. A man in my State bought, at a very cheap price, a lot of combs pretty well filled with honey from a neighboring apiary. He used these as feeders. In those colonies that needed spring feeding I cautioned him, saying, "My friend, do you know whether there has been disease in that apiary or not?" He said, "What is the difference?" I was out on my work, when I received a telegram to come immediately to this man's place. He could not wait for the dispatch to chase me around over the State, but he came overland 60 miles for me. He said, "I have got foul brood up there." I said, "Do you remember a young man who bought some combs with honey in?" He had shown me one comb as clean and white as you please, nearly full of honey, and in there I saw only three cells with foul brood. He had said that it "did not matter." Now, it was just those combs that he had fed. These all had foul brood, but no others. And, by the way, that bee-keeper was formerly of this county. He went back from California to Wisconsin, has had his experience in that, and is coming back to this county this winter to remain permanently with you.



C. A. HUFF'S TANK FOR FUMIGATING FOUL-BROODY COMBS WITH FORMALIN GAS.

Now, I will describe some of the symptoms of foul brood so that if any one here has not had experience, he may profit by it. Foul brood has some characteristics that are true to the nature of the disease; one would be the perforated or sunken cappings. That might also be true of some others, but it is always true at some stages of foul brood. If we would examine underneath this capping we would find a larval bee, according to its development. If we would take the early stages it would be of a coffee color, a brownish color, with a lightish streak in it, and the head end of that larval bee would be somewhat dry—a peculiar characteristic of that stage. The tongue of the bee seems to adhere to the upper wall of the comb. I never found that condition of affairs in pickled brood, black, chilled, or any other condition of brood, that the tongue stands against the upper side-walls; the larva on the lower side-walls, which is of a brownish color, and the bee is about one-half matured. It will remain as found there, the larva continuing to draw down until it will turn up the head, Chinaman-shoe like. Just in that part pickled brood and black brood will do the same thing; that is, they will turn up, but they will not have that little thread running up there.

At that same stage is where it is brown, and has that ropy, stringy nature that I can not find in the case of pickled brood, and I have found it entirely different in black brood, so far as I have examined. Then, at the ropy stage, we get the peculiar odor of foul brood. Now, these are characteristics that are apparent to the eye. I might go into microscopic features, but do not care to take up these details here. I will say, however, this much: Here are specimens from 10 different bee-yards in my own State, samples of this foul brood. (Yes, I will keep them covered up! At your convenience, those of you who have not seen, and want to see the disease, will come up here and inspect these specimens. They are here for that purpose.)

Now, a little instruction as to what to look for:

First, I will ask the California bee-keepers to keep your hands off of the inside of the box, so that you may not carry the disease home. Handle it as you would any other poison. But what are you going to look at? I have marked on the box so you will know just the top end of the box. Looking straight down into the box, these cells seem to be fairly clean, but when you hold it in the sun (I would want to handle it with the sun coming into it in this direction over my shoulder, so that you can look angling down in there, at the lower side-wall, a little back from the front end of the cell). In some of these you will see that dried, black, thin scale, not quite as thick as the side-walls. That is the last stage. I have had men say, "Why is the comb in that condition? What does that amount to?" It amounts to just what I have illustrated with that comb; that brood was in those combs; it revived, and the disease starts again. In one of these combs there are eggs deposited right on top of these scales, and there is also pollen here, and there was some honey.

I was very much interested in the lecture last evening by your veteran bee-keeper, Mr. Harbison, especially in the close of his remarks in regard to foul brood in your district. You have a warmer climate than where I came from, and I do not know what would be possible if foul brood should be in the trees and in the rocks, where your bees have not the troubles of winter as we have. But I do know in Wisconsin, and other Northern States, we need not fear bee-trees, and we never have bees in rocks in our locality, so that from that source we are practically free in the Northern States.

I had the complaint brought that if we treated all the apiaries in the vicinity where we found it, there were bee-trees there, and what was the use treating the disease when the bees from the trees would come in and inoculate everything? I had had some experience in hunting bee-trees, and I went out immediately and examined in regions badly infected with foul brood. In only one tree, where the swarm was not over a year old, did I find any disease, and that was in the last stages. But I did find trees where bees had gone from infected hives, and gone into the tree. I got permission to have those trees cut in my presence, that I might examine the brood, and in not one of them could I find a trace of foul brood. As an illustration, in this case where the bees had no comb foundation, and had to build comb for themselves, we found the bees had treated themselves. That tree I consider practically safe. The only way a bee-tree could become diseased would be where it had accumulated combs and then robbing diseased hives. In that way it might become infected. But in our Northern States we know that they can not stand the winters, and they soon perish, and the squirrels and bee-moth get rid of everything inside that hollow tree in a short time afterward. But in these localities it may be another subject.

Now the old treatment, the McEvoy plan, has come so near perfection, when followed in close detail, that I doubt if we can improve upon it at the present date. A little carelessness in any part of it, and we may spread the disease. Early this season there was considerable writing in our bee-papers of the treatment of infected combs by the use of formaldehyde. Of course, I was interested immediately, and got material together, and as early as possible went at it to test that treatment. As a final result of that, treating a good many combs in various parts of my own State, I will say the results are simply this:

Where the cells are open, where the gas can penetrate into the open cells, where there was dry larvæ, in every case where they were fumigated, the bees carried out the disease, and they continued to be free from infection. So much, I say, where the gas can reach it. But I have been unable to kill the germs of the disease under the capping. It doesn't seem to go through it. In fact, I have found, in capped brood-combs where there were bees apparently healthy, said combs fumigated, and the next day the little bees could crawl. If it would not kill the live bees it would not kill the germs of disease. It had the same ropiness, the same odor after fumigating. In one case I grafted some of that kind of comb into a colony, and had to treat it later.

I would recommend, if you have any doubtful combs, and have any cells capped over, before you use any formaldehyde treatment, that you uncap those cells, allowing the gas to get in there, because the walls of the capping are almost impervious to the gases. I do believe, instead of trying to save all black brood-combs by this formaldehyde treatment, that we would better make wax of it, and put in a new sheet of foundation. It is poor economy. Last year I became disheartened with the saving of old combs. There were parties whose bees seemed to lack energy, but when the old combs were taken away, and they had new ones, there was a new ambition. If, however, we do save the old combs, give them a double dose of formaldehyde treatment. I should be very cautious in trying to save these old combs.

At the Chicago convention, last December, the very best part of it was, after I had finished, those who had had experience, or were afraid they might have, asked questions, drawing out the vital parts. And to those that wanted questions answered, that was worth more to them than the cost of attending the meeting. This is your convention, and I feel I am encroaching upon your valuable time if I do not give you such an opportunity.

(Continued next week.)

Why Not Help a Little—both your neighbor bee-keepers and the old American Bee Journal—by sending to us the names and addresses of such as you may know do not now get this journal? We will be glad to send them sample copies, so that they may become acquainted with the paper, and subscribe for it, thus putting themselves in the line of success with bees. Perhaps you can get them to subscribe, send in their dollars, and secure for your trouble some of the premiums we are constantly offering as rewards for such effort.

Contributed Articles

An Improvement in Honey-Cans Needed.

GOOD, old, black Johnny Parker, when I was a boy, used to rattle off his prayers in boysterous eloquence, with the saliva spattering from his thick lips along with his earnest words, and he seldom failed to use one climax expression, "*Oh, Lawd, speak wid a bois ob sebben peal; a bois like t'under.*" I don't know that I have recalled that expression before for 40 years, till this very evening, while reading the American Bee Journal, on the first moment of its arriving, about a larger opening for honey-cans; and then I felt like invoking Editor York (Johnny Parker fashion), to let his columns ring on the the subject till the improvement asked for is granted.

The retailers all over the country, who out-number the producers ten to one, if not a hundred to one, should have the first right to be considered in this question of convenience, for it is getting the honey out, and not putting it in, that is the matter. A producer can fill his cans, no doubt, through a small hole just as easily as he could through a large hole, and just as cheaply with the same honey-gate. Why should he care for the difference one way or another? For he is not the man who is to be tortured by this shortcoming in the honey-business, in getting that same honey out after it is candied down solid. While he, with a merry tune, can put the liquid honey in the cans, a hundred different men may have it to peck out—with occasion for tears, possibly. Now, whose happiness should be weighed in this case, the one man or the hundred?

In the last two years, on account of shortage with my bees to supply my home demand for honey, I have had, each year, to send for several shipments of honey from New York and Cincinnati, in which the 5-gallon can full of solid honey always figured largely. If the cans are not burst, or cut, or eaten through at the bottom by aciduated honey, or no nail-holes punched in them by the donkey that crates them—shame on him! I am not exaggerating a particle, for I have never yet received a shipment of honey without too many of the cans being exactly as I am describing. Then if they are sound, I like to set four or six of them into a liquefying tank a foot deep, and boil water around them till the honey is in a hot, liquid state.

And now comes the experience with the small-mouthed cans, which does not improve a man's happiness a single bit. No sooner is the honey hot than it begins to swell, and a scum rises thick upon it, and the cans, if they have been honestly filled, will refuse to hold their contents, and they will all be taken with the dyspepsia. Hurry up quick with a bowl and spoon! I grab a tablespoon, and behold it won't go into the mouth of the can, so I am compelled to putter away as fast as I can with a teaspoon to save some of the honey, while the cans are running over and some of the honey is wasting. A hole large enough to admit a cream-ladle 2½ or 3 inches wide would put an end to this waste, and with some men, no doubt, save hard words.

What did you say? "Dig a little out before melting it?" I have tried that, and it is impossible to do it successfully, because the hole is insufficient; and, even then, in some cases I have had them run over because I couldn't get out enough. And if I should take an inch auger, and bore it out in chunks to make room for the froth, that would not liquefy what I would take out.

What is that? "Cut the top out of the can?" Well, I have to do that in most cases now, but it spoils the can, you know; and, besides that, it is not a funny job to lift out of a boiling-hot liquefier a 60-pound can of honey, without handles, brimful, breast high, boiling hot, and burning one's fingers with a possible slop-over, with a woman standing by to say, "You must not use such language." We leave out the flowery language at our house; but I know human nature well enough to guess what most men would say; and I would not waste the gospel on those poor fellows, either, till I went first and secured the reformation of the honey-can makers, for to prevent an evil is much better than to cure. Here is a good chance for A. I. Root's evangelism.

If the narrow-mouthed men should try my liquefier a few times, and it did not put prayers in them for a bigger hole, and two handles to each can, I am mistaken. For I have never yet seen a wire handle on a honey-can that was strong enough to be trusted in holding 60 pounds of hot honey without danger of breaking, for many of them break for me in lifting them out of the crate or box.

And last, but not least, a hole large enough for a cream-ladle would enable the buyer to inspect that honey more fully at first, so as to avoid taking from an unprincipled producer worthless stuff, as I have known to be the case from buying it myself in the present narrow-mouthed cans, which are not favorable for the dealer's inspection. But we fixed it up, for he was a manly man, and took it right back.

So I vote for a 60-pound honey-can with a hole in the corner of the top—as the most convenient place for pouring out hot honey—not less than 2½ or 3 inches large, and a strong wire handle on either side of the top; even if they cost more; for we consumers are the ones, in the end, who will have to pay for them.

Respectfully submitted by,
COMMON-SENSE BEE-KEEPING.

Sweet Clover—Is it Good or Bad?—And Some Other Things.

BY WALTER S. POUDER.

BACK in the seventies, when I first became interested in bee-literature, I was alarmed to learn that sweet clover was not looked on with favor by those who were planting for honey. I had established a small apiary at my father's home, on one of those beautiful hills just north of Cincinnati, and I felt rather badly when I discovered that I was in the midst of great fields of sweet clover. I gleaned from the bee-papers and text-books that bees would become intoxicated on sweet clover, and many a bee would never be able to return with its hard-earned morsel. On going to the clover-fields at twilight I soon learned that there was some truth in the statements that a few bees could be found numbed and dying on the bloom.

As time went on sentiment changed, and we have learned to look forward to having as much sweet clover produced in waste-places as possible. I have been guilty of carrying the seed in my pocket and scattering it in waste-places, and others have done likewise, till it has increased wonderfully. We have all wished for more sweet clover, and now we have it, but I am undecided whether it will ever prove the boon that we have looked for. I do not fear that it destroys bees to amount to anything, but, blooming as it does at the same time with our white clover, and being inferior in quality, it has greatly lessened the value of our white clover crop in central Indiana and southern Ohio this year. It is inferior in taste, in color, and in thickness; in color it has a greenish tinge. I have known the bees to refuse to work on its bloom, and again I have known but two seasons in 30 years when it yielded a surplus in this section of the country.

It yielded a surplus this year, the first since 25 or 30 years; I do not remember the exact year, but it was the same year the National Bee-Keepers' Association met at Indianapolis. [This was in 1886.—ED.] I remember this distinctly, because this was the first big convention of bee-keepers that I had ever attended. At this convention the late Chas. F. Muth exhibited a sample of sweet clover extracted honey, and I remember that Dr. Miller, in his good-natured way, suggested that its greenish color might be attributed to the coal-smoke around Cincinnati. I wanted to get up and say that I had some just like it that was produced where there was no coal-smoke, but I hesitated because I was too bashful.

CONVENTION REMINISCENCES.

I shall always remember this convention in just the same way that a boy remembers his first circus. It was one of the events of my life to meet and shake hands with the men whose names were so familiar in the bee-papers. The late Thomas G. Newman was the principal orator. Dr. Miller was the funny man who kept the house in good cheer. W. Z. Hutchinson, a tall, handsome fellow, was taking items in shorthand for his "Notes from the Banner Apiary." I suppose I whispered to my nearest companion that he is the one I'd like to be. Mr. York was Mr. Newman's handy man, with a budget of books and copies of the American Bee Journal. Mr. York was about the only one who did not care to discuss bees during intermissions. He told some of us boys that those Indianapolis street-cars would be too slow for Chicago, and I guess that I thought, "Well, he's the one I'd rather be."

Frank L. Dougherty was then the Indianapolis honey and bee-supply man. Dr. G. L. Tinker had sent samples of sections made of white-poplar, in four pieces, and I do not believe that I have ever seen their equal in fine workmanship. In fact, I was so favorably impressed with them that I ordered a lot of them as soon as I returned home, and I took them to a printer and had my card printed on them. I used them in a Betsinger case, with wire-cloth separators, and produced honey so fine that when I exhibited it half the observers would say it was "machine-made," because it was too fine to have been made by the bees!

CANS VS. BARRELS FOR HONEY.

I also wish to say a word about barrels for extracted honey. They are not popular in the Indianapolis honey market. There are several reasons for this. Usually the quantity is more than a customer wishes to purchase at once; but the worst objection is that they do not hold out in weight. I have tested the matter a number of times, and a 500-pound barrel will invariably show a loss of 60 to 80 pounds. How this loss occurs I am unable to explain.

The 5-gallon can is the proper article for shipping extracted honey, but there is room for one improvement. The boxes should be bound with hoop-iron to prevent the bottoms from coming off. It is not unusual to find loose bottoms; and an occasional nail plunged in the bottom of a can will do a lot of damage.

A thin layer of excelsior laid in the bottom of these boxes helps a whole lot to make matters safe.

Marion Co., Ind.

The Texas Honey-Producers' Association.

THE bee-men of Southwest Texas, who held a series of meetings recently, are now well organized and incorporated under the laws of that State with $5000 capital, divided into 500 shares and made assessable. The capital stock is all subscribed for, but when a bee-keeper wishes to become a member, certificates are transferred to him.

They began the conduct of business Sept. 1, and up to Oct. 1, when the charter was granted, they had disposed of nearly 15 tons of honey, and had control of nearly 5000 colonies of bees.

This association will give a new impetus to the bee-industry, because members get their supplies, including cans, at wholesale prices, and receive retail prices for their honey. Extensive plans are being inaugurated for a betterment of the condition of the bee-keeper, and the placing of the honey market on a firmer basis by guaranteed full-weight and purity, together with a price that will bring it in direct competition with other sweets. At present the producers are experiencing not only a greater production than demand, but a demoralized market, on the account of much honey being packed in the past with utter disregard to rules of grading, or neatness or care in packing.

The board of directors, consisting of Dr. J. B. Treon, president; L. Stachelhausen, vice-president; M. M. Faust, G. F. Davidson, W. E. Crandall and E. E. Longenecker, are formulating rules for grading, packing and marketing, which will at once place the product of the association in demand, because the dealers will at once know upon what to depend. Samples are required at least three times a year from all members, and as often as the honey seems to take a decided change in flavor and quality.

Promptness in the delivery of honey by railroad is another thing the association is watching with much interest, and are now collecting data. At present, it takes from 6 to 12 weeks to get a local shipment into North Texas and the Territories.

Commission men and others, who, at the outset, looked upon the association with contempt, are now upon a tottering fence, or have fallen entirely on the favorable side, owing to the quiet but determined policy now pursued. Agents of trusts are now placing bids with them, and making desperate efforts to make prices that will defy competition for the present, when, according to the golden rule of the trusts, the producer, or rather consumer in this instance, must suffer. With the efficient anti-trust laws of Texas, and the indignant determination of the bee-keepers, it is safe to say they will live together, or die in the attempt.

Next year considerable comb honey will be produced, and an effort to open the market of our larger cities will be pushed with vigor.

Protection of the producers has also been carried out within the association, by the heavy bonding of the secretary and manager, Lafayette Haines, and treasurer, J. H. Brown.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Introducing Queens—A Bee-House.

Our bees wintered all right last winter. We increased from 7 to 8 colonies, and our bees are getting along fine.

I would like to ask a few questions, the first about introducing queens. What time is the best?

The next is about a bee-house. My papa made a bee-house 50 feet long, 7 feet high, and 7 feet wide; that makes a space in front of 7 feet, and that makes two shelves. We would like to know if we could put the hives one above the other, or if we would have to put them on one shelf. We live in a town, and our lot is not very large, so we must keep our bees as close together as we can.

I like to read what the bee-keeping sisters have to say about their bees. We make our own hives, and I helped to put up the frames, and wire them, and put in the foundation. Hope H. Abel.

Northampton Co., Pa. Oct. 25.

1. The best time in the season to introduce queens is when the bees are gathering honey most freely. The best time in the day is toward evening, when the bees have about ceased to fly.

2. Certainly, you can put them on two shelves, one above the other.

So, Miss Hope, you help make hives and frames, and put in the foundation? I imagine papa thinks you are a big help to him. Wish you had told us how old you are.

◆

Arizona Bachelor Bee-Keepers Want Wives.

The following clipping has been received:

WANTS CAR-LOAD OF WIVES.

Richmond, Va., Oct. 21.—J. Few Brown, cashier of the Valley National bank at Winchester, is asked to send a car-load of Virginia wives to the bachelor bee-farmers of Arizona.

Mr. Brown is a member of the National Bee-Keepers' Association, and the letter is from B. A. Hodsell, an Arizona bee-keeper, also a member. He says he knows of 30 prominent young men in that section who are greatly in need of wives, and who will make faithful and acceptable husbands. He asks that a car-load of girls eligible for wives be sent.

Mr. Hodsell was in Winchester a year ago, and was favorably impressed with the girls in the valley of Virginia.

It's all right for bachelor bee-keepers to desire good wives, but there may be some question whether the best sort of material will be willing to be peddled out in that sort of style. Some inquiries sent in to this department go to show that there is a desire for women bee-keepers as wives, but it may as well be understood first as last, that this department is *not a matrimonial bureau.*

◆

A Bee-Keeping Sister Too Successful.

Mr. A. I. Root, relating in Gleanings in Bee-Culture his travels in Michigan, tells of his surprise at finding that Mrs. Charles Shuneman was going to give up bee-keeping because of too great success! Many of the sisters would gladly share her bee-keeping burden with her, at least the burden of harvesting a big crop of honey. But here is Mr. Root's story:

"I don't know that I ever before in my life found a bee-keeper (or bee-keeper*ess*) who was going to quit the business because of being *too* successful. Mrs. S. says she greatly enjoyed bees until this season. She had enjoyed studying them and building up colonies; and this present year all that marred her enjoyment was the fact that she had secured a tremendous honey crop! The honey was beautiful in quality and great in quantity; but she said it was too hard work for any *woman*, and her husband was in other business, so he could not give her any assistance; so she wanted to sell out and give it up. If the crop had been more moderate, or possibly none at all, she might have gone on keeping bees. There are very queer things in this world of ours, and there are some funny people in it. Perhaps Mrs. S. may conclude that, with the help of the bright boys and girls around her, she may, after a winter's rest, go on with the bee-business."

◆

Honey-Plant Seed—Wintering Weak Colonies.

1. Will you please inform me where seed of the following honey-plants can be obtained: Blue vervain, partridge pea, phacelia tanacetifolia, and cleome?

2. Is it not better to contract the space of hives with weak colonies to save the queens for early spring work, than to unite the colonies? They have plenty of stores to keep them over. Mrs. L. M. Russell.

Monroe Co., N. Y.

1. Any leading seedsman ought to be able to furnish them. Perhaps the A. I. Root Co. can do so.

2. Contracting the space will help, but not a great deal, after all. It is safer to unite than to risk wintering a weak colony. But they can be safely wintered by putting two weak colonies in one hive, as described in "Forty Years Among the Bees."

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

BEES PROTRUDING SMALL DROPS OF NECTAR.

I have begun to be ashamed of it already—and instead of getting well I shall probably get "wuss and wuss"—my last "Afterthink," on page 633. Mr. Arthur C. Miller says it's all right about bees protruding small drops of nectar when roaring at night; but they do it with their mouths, not with the ligula. Not much doubt that he is entirely right in the matter.

THAT SWARM IN A TREE FIVE DAYS.

Uncle Frank's September swarm, which staid five days while nobody dared to meddle with them any more, were quite interesting eccentrics for our instruction. Went west finally. Page 637.

THE C. O. D. MAIL BUSINESS.

A tremendous hint to Uncle Sam is given by the chap who makes the mail do C. O. D. business for him. That the plan should succeed a thousand times is a matter of pleasant interest. No postmaster charged more than ten cents, it seems. No record of what some of them may have *said* about non-required business when they were too busy already. Should the thing spread till postmasters were very often asked to make such collections, there might be a concert of refusal.

Queens by mail C. O. D. Is there anything in that? Established breeder wouldn't like it, I ween. New breeder might offer it to get custom—and then the old chaps might have to fall in. Customers could dance with glee, thinking of the poetic justice (perhaps more than justice) it would give him—means of *compelling* promptness. "Give you one week, and then if she isn't here this transaction's off"—in place of the sickening wait, wait, wait from month to month. Page 643.

NO HONEY-TRUST RIGHT AWAY.

If we don't have a honey-trust till little, small, local trusts first succeed and then gradually unite, we'uns the "skeery" folks can give our trembling thoughts to several other bogies first. Not during A. D. 1904, will the sweet octopus make us feel how bitter it can be—not quite sure about A. D. 2904.

Half the electricity about this subject, which we feel in the atmosphere, is caused by chaps who are thinking of themselves as prominent officers of the Grand Universal Besweetenem—very fellows least qualified, perchance. Page 643.

"YORK'S HONEY" AND THE EDITOR'S TIME.

But those good folks who can't eat anything else than "York's Honey," what ever will they do now? Poor fellows! But their poverty is our riches, I reckon. Apiculture is proud enough to think that its leading journal, or journals, deserve pretty much the full time of an editor. Don't expect her servants to live on air, or even on faith; but she decidedly does like the prospect of having them live, and give her full service, too. Page 644.

DIFFERENCE IN HONEY STORED BY DIFFERENT BEES.

Was Benton bethinking himself, or did he speak thoughtlessly, when he said the honey of one kind of bees was as good as that from another? There is great difference in different species of honey-storing bees as to the quality of the honey they store, why not *some* difference between different varieties inside the species? Page 646.

HOT KNIFE OR COLD KNIFE FOR EXTRACTING.

Ah! it's the cold knife that is one approved California style instead of the hot knife! A little wooden keg of cold water and three knives, two to soak while one is being used. Also, some think it can't be done, while some don't think it, but just *do* it—do it right along in the biggest kind of work. See, also, on page 712, how the knife-man himself, Bingham, says, cold knife, and decidedly reprobates the hot one. Extracting in small way, I always use the cold knife, without even the cold water, excepting to mop off with a rag once in awhile. If I should try the hot water once (which I never fairly did), perhaps I should flop over. Wonder if cold water would really soak off those small granules of wax that oft stick on the edge. In my practice, they call for the thumbnail to be carefully drawn along. Tiny lumps of wax allow a keen blade to pass half way through them, and then hang on with great pertinacity. Oft they are so small that two or three are hardly noticed; but, anon, a lot of them get on until something remedial must be done. I find the temperature of the air in which one works makes a great difference. The hotter the day the worse the knife behaves. Have just been doing some extracting a good deal too cold. Bad for the extracting proper, but the knife does its part well—goes right along without any thumb-nailing or soaking. But get down much colder and the honey itself will hug the knife so you can not proceed with any comfort. Page 645.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Transferring—A Colony Half Drones.

1. How can I transfer a swarm of bees from a grocery box into a hive?

2. I have one colony of bees that has about as many drones as worker-bees. What can I do with them? and what is the cause of there being so many drones?

3. How much honey can bees store from one pound of granulated sugar dissolved in water? Iowa.

Answers.—1. The same as your bee-book directs for transferring from a box-hive. But you would probably better not transfer so late in the season as now. One of the best ways is to wait till the bees swarm next year, and three weeks after swarming you can cut out all the combs with no danger of destroying brood.

2. It is either a case of laying workers or a drone-laying queen. In either case, the best thing is to break up the colony. The bees are probably so old that they are of little or no value to unite with other colonies, and this is one case in which, at this time of year, it may be advisable to kill the bees, as they will soon die anyway, and there is no use in allowing them to consume any more stores.

3. None that you could sell as honey. But if you feed a pound of sugar for wintering, it will probably be equivalent to about 21 ounces of honey.

Buckwheat—Raspberries—Hive-Stands—Fall Covering for Hives.

1. What is buckwheat usually worth per bushel?

2. Would it pay me to furnish my neighbor enough for five acres?

3. How much seed is required per acre?

4. Do bees gather much from raspberries?

5. What does the average bee-keeper use as stands for placing the hives on during the summer?

6. Is there any need of covering the hives with anything during the fall? Wisconsin.

Answers.—1. Varies with locality; about $1.00 here.

2. If no other plant is yielding nectar at the time, it would pay you big.

3. About three pecks per acre.

4. Yes, the raspberry is a very important honey-plant. In some localities, notably in northern Michigan, it yields a handsome surplus.

5. Generally pine boards in some form, the simplest being two pieces of fence-board nailed on the ends of two other pieces.

6. There should be provision made in some way for bees wintered on the summer stands to be covered warmer in winter than in summer, and this may as well be on in the fall.

Keeping Comb Honey in Winter.

I have read your "Forty Years Among the Bees," and note what you say, on page 310, but here goes for a question—not of bees, but of honey:

We have a closet in our living room close to the stove, and I have filled it with honey, in small no-drip cases, with 15 sections in each. My wife thinks the honey will sour and spoil. I want to keep it from freezing. Will the heat from the stove spoil my honey? Ohio.

Answer.—Tell your wife that for once she will probably have to give up in the wrong. That closet, close by the stove, ought to be an ideal place for keeping honey, and would be all the better if it would keep not far from 100 degrees. Even a good bit above that would do no hurt. See page 271 of the book you have mentioned.

Late-Reared Queen.

I received a queen all right, and put her into a new hive with a frame of brood. I looked for and could not find her, but found five queen-cells capped, and the rest of the brood hatched. I suppose that indicated that she was killed, and they will rear another, but it will be too late to be fertilized this fall. Will she be any good? And will the bees work in a cucumber-house this winter? The other queen did very well. Massachusetts.

Answer.—She may and she may not be worth something next spring—chances not greatly in favor. A colony will work in a cucumber-house, and will help the cucumbers, but it will not help the bees.

Carniolans and Italians.

Please describe through the American Bee Journal, in a strictly "Truthful James kind of way," the Carniolan bees, and compare them with the Italians. In what respect is the one superior, or inferior, to the other? Iowa.

Answer.—I don't know enough to do as you desire, having had no personal experience with Carniolans. Even if I had, you might not have the same experience, for testimony concerning them is very contradictory. Probably Carniolans are not all alike. They are much more given to swarming than Italians, and the general testimony is that they are gentler. A cross between Carniolans and Italians is highly spoken of by some.

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FROM MANY FIELDS

A Good Honey-Year.

After a very poor outlook last spring, it turned out to be a good honey-year in this locality. I had 75 colonies of half-starved bees, spring count, and they increased to 100, and brought me over 3000 pounds of salable white comb honey. **Wm. Hartwig.**

St. Croix Co., Wis., Oct. 31.

Bees Nearly a Failure This Year.

The bee-business was nearly a failure here this year. It has been too wet and cold. From 80 colonies I got about 1000 pounds of honey, the most of it being comb honey.

Well, if I live another year I will try my luck with bees once more. We may get a crop of honey some time, if we only hang on and do not give up. **Frank E. Knapp.**

Wadena Co., Minn., Oct. 30.

Good Season—Bee-Paralysis.

I started in last spring with 10 colonies, increased by natural swarming to 16, and harvested 250 pounds of white clover honey and 1000 pounds of fall honey, about 175 pounds of this being comb honey, and the balance extracted. My best colony gave me 325 pounds; they were a good grade of Italians. I had 3 young colonies that gave me 125 pounds each, besides filling up all right for winter. This has been a good season for honey here.

I have introduced four queens with good success this year. One queen I got from Texas, and introduced her to a small queenless colony in May; they gave me 125 pounds of honey. This reminds me about introducing young queens to colonies that are affected with paralysis. I have changed the queen in 3 different colonies and the disease has disappeared entirely. I think the cure is all right, at any rate in my case. I had 2 cases last spring where the disease was so bad that the colony nearly died out, and yet the young queen saved all, and they gave me a nice lot of surplus honey.

I had a colony that lost their queen early in the spring, and they reared 42 perfect queens in their hive. The weather was bad, and they could not swarm, so they just killed them and kicked them out at the entrance, and I picked them up. **A. J. Freeman.**

Neosho Co., Kans., Oct. 30.

Report for the Season.

I cannot refrain from writing once a year at least, because I never took a paper that I thought was conducted quite as well as the American Bee Journal is being conducted. For my part, I can not see how some men can handle bees without it or some other bee-paper; where they do, I surely think that the bees handle *them* the greater part of the time.

Three years ago I wintered 5 colonies, two years ago 9, and one year ago 20, and two of those died or dwindled away during a long, cold, wet spell we had last April. One of my neighbors had 2 colonies, and wishing to dispose of them, I traded him a hog for the bees, so this made my number good again. I have 35 this fall to put into winter quarters, nearly all being in very good condition. I think we had too much rain this season for a good crop of honey, or else I have too many bees for the pasture they have. I don't know which, as I got only about 600 pounds—30 pounds to the colony, spring count. I had one colony that stored 80 pounds of comb honey; they swarmed once, but I returned them and clipped their queen.

I would like to keep my number about where it is now, or reduce it some if I can, and I have read of so many ways that I hardly know which to adopt. This season I practiced cutting out queen-cells while the swarm was out, and then return them, but I am quite sure this would not work where one person had a very great number of colonies. Toward

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PAGE

THE MAD CAREER

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the close of the swarming season I got to clipping the queens, which I thought a better plan. As this has been a great season for swarming, the same method may work better another year.

I have read the editor's writings about the trip to California to attend the National Bee-Keepers' convention at Los Angeles, until—well, until I imagine I have been there myself. His description and explanation of things are so plain and perfect that I prize the writings very highly indeed, and hope to have the privilege of reading of many trips of like nature; also that Dr. Miller and our family namesake may live to attend many more of those meetings, for without them how would the editor's writings be complete?

W. H. Root.

Wayne Co., Nebr., Nov. 3.

Results of the Past Season.

My bees did very well, considering the season. I had 18 colonies in the spring, increased to 30, and got 2680 pounds of honey, mostly white clover. One colony gave 224 4x5 sections, all salable. I use the Danzenbaker hive exclusively. I know my locality, understand its flora, and have a method of handling swarms that has made bee-keeping successful as well as profitable with me.

C. E. Aurich.

Iroquois Co., Ill., Nov. 4.

[We would be pleased to publish your method of handling swarms.—Editor.]

In Justice to California.

I was somewhat amused and surprised at the articles written by different ones about California. Now, I do not want to criticise any one, but it is no more than fair to all Californians and prospective settlers that a wrong impression should be corrected.

Now, one impression is that we have a honey crop only once in 4 or 5 years. I have lived in the State since 1884, and have worked with bees nearly every season, and have an apiary at the present time. If my memory serves me rightly, the only total failure was in 1898; that season the bees in certain localities actually starved. It is true we have had more failures in grain-growing districts (I mean the grain crop), but because of a grain failure it is not always necessarily a failure in honey-production. In the season of 1887, and others which were very dry, the bees did remarkably well, the soil retaining its moisture from the previous season; neither does a very wet year always insure a large honey-yield.

In regard to honey-plants, a person not familiar with this country would suppose from the articles that the sages were the only natural honey-producing plants growing here. Should this be the case, I believe two years from now would see no more bees in this part of the State.

Let me name some of our honey-plants; I will enumerate them as they come in the season (from March to September): Alfilaree, willows, horsemint, and numerous other wild flowers; then come black sage, white sage, wild alfalfa, wild buckwheat, and last, tar-weeds. And we also have quite a few tame honey-producing plants, alfalfa, deciduous fruit-bloom, eucalyptus bloom, etc. Now, this applies to Southern California, and not to Los Angeles and vicinity alone. Remember this is no small territory—from Los Angeles to the Mexican border to the south is somewhere about 150 miles. I believe it is about the same distance to San Luis Obispo county to the north; and the distance between the large mountain ranges and the sea coast is about 100 miles, on an average. Now, is it reasonable that a person can form a correct idea of the country unless he sees more than can be seen from the trolley line that runs between Los Angeles and Pasadena? A person should be here at least during the honey season, say April or May, to gain some knowledge of the country.

Now, Mr. Editor, come out about next May, and I will be glad to take you over some bee-ranges in Riverside or San Bernardino counties.

A. F. Wagner.

Riverside Co., Calif., Oct. 24.

[We are glad Mr. Wagner wrote the foregoing. We certainly do not want to misrepresent any part of our great country.

We hope to have the privilege some time of spending a few weeks in California, as we are fully convinced that going there in the dry season for only a few days one can not possibly get a correct idea of things in the apicultural line.

If any other erroneous impressions have been given in these columns, we will be glad to have them pointed out.—Editor.]

Season Too Wet for Bees.

The season here was too wet, and so many cloudy days. My bees, in the "Happy Home Hive," have enough to winter well, and some surplus, but not enough to brag about. Many colonies still have drones, notwithstanding they stopped breeding about Sept. 20.

Carroll Co., Md., Oct. 30. H. H. Flick.

Bees Did Fairly Well.

The bees did fairly well here. I started last spring with 41 colonies, increased to 73, and put back about 30 swarms. I secured about 1500 pounds of fine comb honey.

W. R. M. Coyle.

Vernon Co., Mo., Oct. 29.

Poor Seasons in Succession.

We have gone through six poor seasons here now in succession, which makes it pretty tough. We had hoped this would be a good one, but May was very dry, and May and June were both cold, with north winds blowing. It seems strange there was such a good honey harvest in Illinois; the weather must have been cold there, too. The only way that I can account for it, is that they had rain a little sooner than we did, and that saved the clover. I never saw a good season that was dry through April and May, while the clover is growing. It can be dry when the clover has matured, and it will do no harm, but not while it is growing.

George M. Stinebring.

Wayne Co., Ohio, Nov. 5.

Transferring Bees from Box-Hives.

This is my way of transferring bees from old hives without frames: If it is a gum I lay it on its side, with the comb standing on edge; nail a board on the bottom, leaving a hole large enough for the bees to enter the hive, and bore a number of holes in the top side of the hive. Prepare an 8-frame super with foundation in it, and place a queen-excluder between the hive and super, which keeps the queen out of the super, and no young bees will bother you. When I want to extract from it I will get a lot of honey from it that season, as it will not be checked from increasing in the latter part of the season. Quit extracting in time for

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them to fill their extracting frames for winter; remove the queen-excluder so the queen can go above to lay, which she will do almost invariably; if she does not, blow a little smoke into the entrance which will drive her up. When you find that she is up, put the excluder on again. and after the required time to hatch the brood has expired, place a new hive where the old one stands, and remove the old one, putting in the frames that are in the super with the bees that adhere to them. The old hive will have but little honey in it, as they have put it into the extracting-frames. The combs can be rendered into wax, as it is generally cracked and old, and probably some of it filled up with pollen.

I want to do this work in the first part of the season. I have always had the best results from transferring as I have stated. The whole strength of the colony is used to produce heat, so the changes in the weather do not interfere with brood-rearing; in fact, they transfer themselves—they hardly know they have made a change. J. G. Creighton.

Hamilton Co., Ohio, Nov. 5.

The Season in South Carolina.

Our honey crop was a failure here this year in the spring and summer, and our bees were about ready to starve Aug. 1, but the cotton commenced to give some honey, and then they gradually built up, so that by Sept. 15 they were in good shape, and we had a good flow from Oct. 1st to the 20th, so the bees are in fine shape for winter. I have 70 colonies at home, and 15 at an out-yard, and they all have plenty of winter stores, and some of them could spare some, as the two-story hives have from 50 to 75 pounds each.

W. M. Bailey.

Spartanburg Co., S. C., Nov. 7.

Bees as a Side Issue.

We had a bad summer. As it was so rainy and cold all through the early part the bees nearly starved in June, but by careful management I got a little surplus—all fancy—and I sold it at from 17 to 20 cents per section. I am now ready to commence the winter with 28 colonies, all in fair condition.

I found a bee-tree in May, cut it down and hived the bees; they had a fine leather-colored queen, and built up nicely, and are in good shape. I am a farmer, and keep a few colonies of bees as a side-issue, to help pay taxes.

Ira Shockey.

Randolph Co., W. Va., Nov. 6.

Late Queen-Introduction—Rearing Queens.

I received a queen this afternoon, and notwithstanding the cold, she and her attendants were in first-class condition. It required great care to hunt out a queen in a strong colony of mongrel bees, covered all over with flaming war-paint, but I did it, and got only one sting. The temperature at the time was 40 degrees above zero.

I can not sympathize with those who make so much complaint of getting poor queens from queen-breeders. I have bought queens from many persons for more than 30 years, and I can not recall more than one really inferior. I got one a few years ago that, for a time, laid comparatively few eggs, but later she kept her hive full of very fine bees, and the queens reared from her were among the very best I ever had.

Late last season I reared a queen in a small nucleus, which had lost its queen on her excursion to meet a drone; I gave it a bit of comb, only large enough for one cell, so the bees had but one larva to feed. I think there was not more than a pint of bees. The young queen seemed well developed, and became fertile, and began to lay a little in advance of the usual time. She pleased me so much that I introduced her to a full colony, and she has proved one of the very best queens in my apiary. She has done so well the past season that I want to try her another year, at least. From this experience, and from some others, I am satisfied that good queens can be reared in nuclei as well as in full colonies. Yet I would prefer to have cells built in full colonies and under the swarming impluse. I get nearly all of my queens in that way. M. Mahin.

Henry Co., Ind., Nov. 6.

Box-Hives vs. Modern Hives.

I see that many disparaging remarks and many sarcastic comments appear from time to time concerning "box-hives" and all who use them. And while not in any way an admirer or advocate of them, I would like to point out *one* reason why many such despised hives are still used, and always will be. That overwhelming reason is the *expense* connected with a good, modern hive, no matter which you select. And remember that the despised "box-hive" is always perfectly satisfactory to the *bee*.

To illustrate the expense connected with the change from box-hives to modern hives, I give my own experience:

I have kept from 10 to 15 colonies of common black bees in box-hives for the last three years, from 1900 to 1902, and this year I transferred them to 8-frame dovetailed hives, using the combined stand and bottom-board, and gable covers. Last spring I had 11 box-hives, with all colonies strong. I bought 20 hives, 1½ stories, and 5 extra supers, sections enough to fill all supers, enough extra thin foundation to put full sheets in all sections, and light brood to fill all frames with full sheets; bee-escapes, veil, smoker, foundation fastener, book, paint, etc., making a total expense of $50.30.

Later on I purchased 16 Italian queens for $13.00; making a total of $63.30 for the first year. Expenses for the next season will be $51.00; for 1905, $62.74; for 1906, $80.39; and from that on, when I shall have an apiary of 50 3-story hives, the annual expense for supplies of all kinds will be about $85 00. Therefore, my apiary of 50 hives complete will cost me $257.43. All these expense items are based on the A. I. Root Co.'s latest price-list. If prices continue to rise, as seems probable, the expense will be more.

There is one other item of expense that I

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Langstroth on... The Honey-Bee

Revised by Dadant—1900 Edition.

This is one of the standard books on bee-culture, and ought to be in the library of every bee-keeper. It is bound substantially in cloth, and contains over 500 pages, being revised by those large, practical bee-keepers, so well-known to all the readers of the American Bee Journal—Chas. Dadant & Son. Each subject is clearly and thoroly explained, so that by following the instructions of this book one cannot fail to be wonderfully helped on the way to success with bees.

The book we mail for $1.20, or club it with the American Bee Journal for one year—both for $2.00; or, we will mail it as a premium for sending us **THREE NEW** subscribers to the Bee Journal for one year, with $3.00.

This is a splendid chance to get a grand bee-book for a very little money or work.

GEORGE W. YORK & CO.
144 & 146 Erie Street, CHICAGO, ILL.

☞ The good advertiser is ever ambitious to do better advertising.—Printers' Ink.

Don't Order your **HIVES** until you get our prices. We are making the Dovetailed Hive from Michigan White Pine—the best pine on earth. 10 percent discount from now until Dec. 1.

THE WOOD-BRUSH BEE-HIVE
AND BOX CO.,
LANSING, - MICH.

42Atf Please mention the Bee Journal.

Sections, Shipping-Cases, Honey-Cans,

And everything necessary for the bee-keeper
Prompt shipping. FINE ITALIAN QUEENS
Catalog free.

C. M. SCOTT & CO.
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BOYS WE WANT WORKERS

Boys, Girls, old and young alike, make money working for us. We furnish capital to start you in business. Send us 10c stamps or silver for full instructions and a line of samples to work with. DRAPER PUBLISHING CO., Chicago, Ill.

Please mention Bee Journal when writing.

HONEY-JARS.

I can sell you a White Glass Honey-Jar, holding 15 ounces of honey, at $4.00 per gross. Also the standard square one-pound Jar at $4.50 per gross. Sample of either Jar by mail on receipt of 10 cents for postage.

J. H. M. COOK, Bee-Keepers' Supplies
62 Cortlandt St., NEW YORK CITY.

41Atf Please mention the Bee Journal.

BINGHAM'S PATENT Smokers

25 years the best.
Send for Circular.

25Atf T. F. BINGHAM, Farwell, Mich.

Please mention Bee Journal when writing.

have not mentioned. Nine of the box-hives that I had were "on shares," and the owner got scared at the expense and risk of transferring, and sold out to me. So $20 more must be added, making $83.30 for 1903, and $273.33 for the apiary complete.

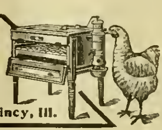
Also, there arises another item of expense in the loss of honey entailed by transferring, and the loss of 3 colonies in the same operation. Thus, I started with 11 colonies and got 9 swarms, so would have 20 colonies in box-hives. I have averaged about 50 pounds surplus honey per colony for the past 3 years, and have ready sale for all the chunk honey I can produce at 12½ cents per pound. So that even if none of the swarms had given any surplus, I would have 550 pounds of honey, or $68.75. Instead of which I have 16 colonies, and 2 of the transferred colonies had to feed 25 pounds of syrup for winter supplies, and I got only $10 worth of surplus honey; thereby losing $58.75, making the total expense for apiary, $338.18. Had I continued to use box-hives the expense would have been *nil*.

Thus, you will readily see that not many farmers (and they are the people that will be generally found using box-hives) can contemplate the expense of buying modern hives and all the many necessary appliances they entail with any degree of equanimity. You will understand that I expect it to pay *me* well (notwithstanding the expense), or I should not have entered on the necessary expense for the next 3 years. But most users of the box-hives couldn't, and wouldn't, stand the expense, even if they knew that they would double or treble their honey crop.

So as I began so must I end—the *expense* entailed in using modern hives and appliances is responsible for the continued use of the despised "box."

A BEE-KEEPER IN VIRGINIA.

Augusta Co., Va., Oct. 26.



$12.80 For 200 Egg INCUBATOR
Perfect in construction and action. Hatches every fertile egg. Write for catalog to-day.
GEO. H. STAHL, Quincy, Ill.
45A26t Please mention the Bee Journal.

For Thanksgiving Day
a rate of one fare and a third for the round trip has been authorized to points within 150 miles on the Nickel Plate Road, good returning to and including Nov. 30, 1903. La Salle Street Passenger Station, Chicago, Cor. Van Buren and La Salle Streets, on the Elevated Loop. City Ticket Offices, 111 Adams Street and Auditorium Annex. 'Phone Central 2057. 27—44A4t

20,000 Pounds
White Alfalfa Honey for sale. Address
DR. GEO. D. MITCHELL & CO., Ogden, Utah.
46Atf Please mention the Bee Journal.

WANTED, COMB HONEY—We have an unlimited demand at the right price. Address, giving quantity, average weight per case, quality and price, properly crated, and delivered to your depot. **THOS. C. STANLEY & SON,**
MANZANOLA, COLO., OR FAIRFIELD, ILL.
Please mention Bee Journal when writing

WANTED—Extracted Honey.
Mail sample and state lowest price delivered Cincinnati. Will buy FANCY WHITE COMB HONEY, any quantity, but must be put up in no-drip shipping-cases.
C. H. W. WEBER,
2146-48 Central Ave., CINCINNATI, OHIO.
24Atf Please mention the Bee Journal.

WANTED—Comb Honey in quantity lots. We are perhaps the only dealers in this article owning as much as 150,000 pounds at one time. Please state quantity, quality and price asked for your offerings, **Thos. C. Stanley & Son,**
24Atf MANZANOLA, COLO., or FAIRFIELD, ILL.
Please mention Bee Journal when writing.

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HERMAN F. MOORE, Sec.
GEORGE W. YORK, Pres.

P. S.—It has been suggested that bee-keepers bring with them samples of honey, and such little appliances as they have that are considered handy to work with in the apiary.

Colorado.—The 24th annual meeting of the Colorado State Bee-Keepers' Association will be held in the Chamber of Commerce Hall, Denver, Colo., Nov. 23, 24 and 25, 1903. An unusually fine program has been prepared. One of the features will be a display of hives, supers and frames manufactured in Colorado. The attendance of all Colorado bee-keepers is earnestly solicited. Write for program to

Boulder, Colo. H. C. MOREHOUSE, Sec.

Minnesota.—The Minnesota Bee-Keepers' Association will hold its annual meeting at Minneapolis, Minn., Wednesday and Thursday, Dec. 2 and 3, at the First Unitarian Church, on the corner of 8th St. and Mary Place (midway between Hennepin and Nicollet Aves.) Go in on the Mary Place side. Procure certificates from your local railroad agents when you purchase tickets, and those living in Minnesota can return for one-third fare, and we hope to secure the same for those living in Wisconsin, Iowa, and the Dakotas. DR. L. D. LEONARD, Sec.

WM. RUSSELL, Pres.

Missouri.—The Missouri State Bee-Keepers' Association will meet in Mexico, Mo., Dec. 15, 1903. J. W. Rouse will act as host to direct the attendants to the hall, which is free to all who desire to attend. Board may be had at the leading hotels at $1 to $2 a day. Come, everybody who is interested in bees and honey. Let us have a big meeting. We now have 51 paid-up members. Let us make it 100. Procure certificates from your local railroad ticket agents when you purchase your tickets. It may be you can return for ⅓ fare.

W. F. CARY, Sec. J. W. ROUSE, Pres.

Canada.—The annual meeting of the Ontario Bee Keepers' Association will be held in the Town Hall of Trenton, Ont., Tuesday, Wednesday and Thursday, Dec. 1, 2 and 3, 1903, beginning at 2 p.m. on Tuesday. On the program are the following:

"The Advantages of Out-Apiaries; How, When and Where to Move Them," by B. O. Lott; "Shook Swarms," by Morley Pettit; "The Benefits of Organization and the Extension of the Markets," by F. W. Hodson, of the Agricultural Department; "On the Storing of Comb Honey," and "Experiments in the Preparation of Vinegar from Honey," by Prof. Frank S. Shutt;" "Address on Experiments," by John Fixter, of the Experimental Farm. There will also b an address by Prof. James, Deputy Minister of Agriculture of Ontario. A report of the Ontario Honey Exchange will be given and discussed. Messrs. Morley Pettit and C. W. Post will have charge of the Question Drawer. The evening of Dec. 2d will occur the annual banquet.

Persons having any new or practical inventions are invited to bring them to the convention and place them on exhibition to show their practical uses. There will be a place for showing these articles.

All persons going to the convention should purchase a full-fare single ticket from the agent at starting point, and get a standard certificate, and if sufficient attend and hold these certificates, the return fare will be one-third, according to the arrangements made with the different railway companies, or, if under 50, two-thirds single fare.

The leading hotels—the Bleecker House, St. Lawrence Hall, and the Hotel Aberdeen—will give a rate of one dollar per day.

A very cordial invitation is extended to all persons interested in bee-keeping to attend and take part in the discussions.

Streetsville, Ont. W. COUSE, Sec.

HONEY AND BEESWAX

MARKET QUOTATIONS

CHICAGO, Nov. 7.—The supply of comb honey is large, and sales are being forced, so that it is a little difficult to give accurate figures. Sales are not easily made of fancy at anything over 13c per pound, with less desirable grades selling lower. Extracted, white, brings 6@7½c, according to kind, flavor and package; amber, 5½@6½c. Beeswax, 28@30c.

R. A. BURNETT & CO.

PHILADELPHIA, Nov. 9.—Honey arriving very freely the last week and prices little easier. This month is best month in the year for demand of comb honey. We quote fancy white, 16@17c; No. 1, 14@15c: buckwheat, fancy, 15c. Extracted, white, 7@8c; amber, 6@7c. Bright yellow beeswax, 32c. We do not handle on commission. WM. A. SELSER.

ALBANY, N. Y., Nov. 7.—Honey demand and price keeps up remarkably well yet. Fancy white, 16c: A No. 1, white, 15c; No. 1, 14½@15c; mixed, 13½@14c; buckwheat, 13½@14c. Extracted, dark, 6½c; mixed, 6½@7c; white, 7@7½c; but not as active as comb. Beeswax, 30c. H. R. WRIGHT.

CINCINNATI, Nov. 7—The demand for honey is a little better. The prices rule about the same. Extracted is sold as follows: Amber, in barrels, from 5¼@5½c; in cans about ½ cent more; water-white alfalfa, 6@6½ cents; white clover, 6¾@7½c. The comb honey market is quite lively, and it sells as follows: Fancy water-white, 14@15c .Beeswax in good demand, at 30c delivered here. C. H. W. WEBER.

BUFFALO, N. Y., Oct. 11.—The demand for white comb honey is better than it was. The trade is particular and wants only very white, clean stock. If the wax is yellow from travel-stain it does not sell well, and price has to be cut. Fancy white comb, 14@15c; A No. 1, 13½ @14c; No. 1, 13@13½c; No. 2, 12@12½c; No. 3, 11@12c; No. 1 dark comb, 11@12c; No. 2, 10@11c. White extracted, 6½@7c; amber, 6@6½c; dark, 5½@6c. Beeswax, 28@30c.

W. C. TOWNSEND.

BOSTON, Oct. 8.—Comb honey continues to be in good demand. Fancy white honey in cartons we quote at 18c; No. 1, at 16c; glass-front cases fancy white, at 16c; No. 2, at 14c. Extracted honey, Florida. 6½@7½c, according to quality.

BLAKE, SCOTT & LEE.

KANSAS CITY, Oct. 23.—Receipts of comb honey good; demand good; market easier. Receipts of extracted light. We quote: Fancy white comb, 24 sections, per case. $3.00; No. 1, white and amber, $2.75; No. 2, $2.50. Extracted, white, 7c; amber, 5@6c. Beeswax, 25@30c.

C. C. CLEMONS & CO.

CINCINNATI, Oct. 1.—Comb and extracted honey are coming in freely, and the demand is good with steady prices. We are making sales at the following prices: Amber extracted at 5¾@6½c; white clover, 6½@7½c. Fancy comb honey, 15c. Beeswax, 30c.

THE FRED W. MUTH CO.

NEW YORK, Sept. 28.—Comb honey is arriving quite freely now, and is finding ready sale at 15 cents per pound for fancy white, 13@14c for No. 1 white, and 12c for No. 2 white and amber. Very little buckwheat on the market as yet, and prices are hardly established.

Extracted honey is ruling about the same as last with plenty of offerings of all grades.

Beeswax is somewhat declining and selling at present at from 28@29c per pound.

HILDRETH & SEGELKEN.

SAN FRANCISCO, Oct. 21.—White comb, 1-lb. frames, 13@14 cents; amber, 9@11c. Extracted, white, 5¾@6¼c; light amber, 5@5½c; amber, 4½@5c; dark amber, 4@4½c. Beeswax, good to choice, light, 27½@29c; dark, 25@26c.

Market is more quiet than for several weeks preceding, but is fairly steady as to value. Spot stocks and offerings of both comb and extracted are mainly of amber grades, while most urgent inquiry is principally for water-white, the latter being the only kind meeting with much competitive bidding from buyers. Recent arrivals of honey included a lot of 121 cases from the Hawaiian Islands. The bees of the Islands feed mainly on sugar.

WANTED! FANCY COMB HONEY
In no-drip shipping-cases. Also Amber Extracted in barrels or cans. Quote your best price delivered Cincinnati. The Fred W. Muth Co.
32Atf Front and Walnut, CINCINNATI, OHIO.

The Best Bee-Goods in the World....

are no better than those we make, and the chances are that they are not so good. If you buy of us **you will not be disappointed. We are undersold by no one.** Send for new catalog and price-list and free copy of THE AMERICAN BEE-KEEPER; in its thirteenth year; 50 cents a year; especially for beginners.

—THE—

W. T. Falconer Mfg. Co.,
JAMESTOWN, N. Y.

W. M. GERRISH, Epping, N.H., carries a full line of our goods at catalog prices. Order of him and save the freight.

Please mention Bee Journal when writing.

$300,000,000.00 A YEAR and you may have part of it if you work for us. Uncle Sam's poultry product pays that sum. Send 10c for samples and particulars. We furnish capital to start you in business. **Draper Publishing Co., Chicago, Ill.**

(Exact size of the Pen.)

FREE as a .... Premium

A Foster Stylographic PEN....

This pen consists of a **hard rubber** holder, tapering to a **round point,** and writes as smoothly as a lead-pencil. The **point** and **needle** of the pen are made of **platina,** alloyed with **iridium**—substances of great durability which are not affected by the action of any kind of ink.

They hold sufficient ink to write 10,000 words, and **do not leak or blot.**

As they make a line of **uniform width** at all times they are **unequaled for ruling purposes.**

Pens are furnished in neat paper boxes. Each pen is accompanied with full directions, filler and cleaner.

BEST MANIFOLDING PEN ON THE MARKET.

19,000 Postmasters use this kind of a pen. The Editor of the American Bee Journal uses the "Foster." You should have one also.

How to Get a "Foster" FREE.

Send TWO NEW SUBSCRIBERS to the American Bee Journal for one year, with $2.00; or send $1.90 for the Pen and your own subscription to the American Bee Journal for one year; or, for $1.00 we will mail the pen alone. Address,

GEORGE W. YORK & CO.
144 & 146 Erie St., Chicago, Ill.

Hives, Sections, Foundation, etc. We can save you money. Send list of goods wanted and let us quote you prices. ROOT'S GOODS ONLY. Send for Catalog.
M. H. HUNT & SON, Bell Branch, Mich.

26th Year **Dadant's Foundation** 26th Year

We guarantee Satisfaction. What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS. PATENT WEED-PROCESS SHEETING.

Why does it sell so well? Because it has always given better satisfaction than any other. Because in 25 years there have not been any complaints, but thousands of compliments.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

Bee-Keepers' Supplies OF ALL KINDS *****

Very fine pure-bred BARRED PLYMOUTH ROCK Chickens and Eggs for sale at very low prices.

Langstroth on the Honey-Bee—Revised,
The classic in Bee-Culture—Price, $1.20, by mail.

BEESWAX WANTED at all times.

DADANT & SON,
Hamilton, Hancock Co., Ill

Please mention Bee Journal when writing.

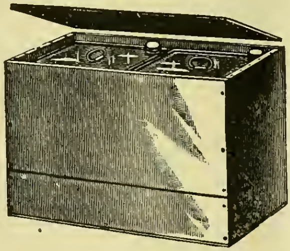
BEST

Extracted Honey For Sale!

ALL IN 60-POUND TIN CANS.

Alfalfa Honey

This is the famous White Extracted Honey gathered in the great Alfalfa regions of the Central West. It is a splendid honey, and nearly everybody who cares to eat honey at all can't get enough of the Alfalfa extracted.



Basswood Honey

This is the well-known light-colored honey gathered from the rich, nectar-laden basswood blossoms. It has a stronger flavor than Alfalfa, and is preferred by those who like a distinct flavor in their honey.

Our honey is put up in tin cans holding 60 pounds of honey each. These cans are shipped in wooden-boxes, and should arrive safely. We have nothing but **PURE BEES' HONEY** to offer, and so guarantee it. **Cash must accompany each order.** All prices are f.o.b. Chicago.

Prices of Alfalfa Honey:

One 60-lb. Can @8c	$ 4.80
Two 60-lb. Cans (in 1 box) @7½c	9.00

(Larger quantities at the 7½c price.)

Prices of Basswood Honey:

One 60-lb. Can @9c	$ 5.40
Two 60-lb. Cans (in 1 box) @8c	9.60

(Larger quantities at the 8c price.)

A sample of either Alfalfa or Basswood honey will be mailed on receipt of 10 cents; samples of both kinds for 16 cents. (Stamps accepted.)

BEESWAX WANTED—We are paying 28 cents cash or 30 cents in trade for pure average beeswax delivered in Chicago (or Medina, Ohio.

HONEY-JARS—Don't forget to get our prices on all sorts of honey-packages.

THE A. I. ROOT COMPANY,
Successors to GEORGE W. YORK & CO.,
144 East Erie Street, - CHICAGO, ILL.

The Chicago-Northwestern Convention—Dec. 2 and 3, 1903

AMERICAN BEE JOURNAL

Published Weekly by GEORGE W. YORK & CO., 144 & 146 E. Erie Street.

43d Year. CHICAGO, ILL., NOV. 26, 1903. No. 48.

WEEKLY

AN APIARY OF M. H. MENDLESON, IN VENTURA CO., CALIF.

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EDITOR,
GEORGE W. YORK.

DEPT. EDITORS,
DR. C. C. MILLER, E. E. HASTY, EMMA M. WILSON

IMPORTANT NOTICES.

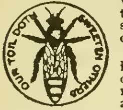
The Subscription Price of this Journal is $1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

The Wrapper-Label Date of this paper indicates the end of the month to which your subscription is paid. For instance, "dec03" on your label shows that it is paid to the end of December, 1903.

Subscription Receipts.—We do not send a receipt for money sent us to pay subscription, but change the date on your wrapper-label, which shows you that the money has been received and credited.

Advertising Rates will be given upon application.

A Celluloid Queen-Button is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-lapel. It often serves to introduce the subject of honey, and frequently leads to a sale.


OUR TOIL DOTH SWEETEN OTHERS

The picture shown herewith is a reproduction of a motto queen-button that we are furnishing to bee-keepers. It has a pin on the underside to fasten it. Price, by mail, 6 cents; two for 10c; or 6 for 25 cents. Send all orders to the office of the American Bee Journal.

The Emerson Binder

This Emerson stiff-board Binder with cloth back for the American Bee Journal we mail for but 60 cents; or we will send it with the Bee Journal for one year—both for only $1.40. It is a fine thing to preserve the copies of the Journal as fast as they are received. If you have this "Emerson" no further binding is necessary.

GEORGE W. YORK & CO.,
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20,000 Pounds

White Extracted Alfalfa HONEY FOR SALE.
Address.
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H. R. WRIGHT.

CINCINNATI, Nov. 20.—The demand for comb honey is slower now than it was six weeks ago, owing to the enormous quantities offered on all sides. Fancy comb is sold in single case lots at 14c. The supply of extracted honey is big, although the demand is good. We are selling amber extracted in barrels at 5¾@6½c. White clover, in barrels and cans, 7½@8½c, according to quality. Beeswax, 30c.
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GEORGE W. YORK, Pres.

P. S.—It has been suggested that bee-keepers bring with them samples of honey, and such little appliances as they have that are considered handy to work with in the apiary.

New York.—The Fulton and Montgomery Counties Bee-Keepers' Society will meet at the Central Hotel, Market Street, Amsterdam, N.Y., on Tuesday, Dec. 22, 1903, at 10 a.m. This will be the regular business meeting of the Society for electing officers, payment of annual dues, and any other business which may come before this meeting. Annual dues. $1.00, which also includes a membership in the State and National Associations. T. I. DUGDALE, Sec.
F. P. JANSEN, Pres.

Minnesota.—The Minnesota Bee-Keepers' Association will hold its annual meeting at Minneapolis, Minn., Wednesday and Thursday, Dec. 2 and 3, at the First Unitarian Church, on the corner of 8th St. and Mary Place (midway between Hennepin and Nicollet Aves.) Go in on the Mary Place side. Procure certificates from your local railroad agents when you purchase tickets, and those living in Minnesota can return for one-third fare, and we hope to secure the same for those living in Wisconsin, Iowa, and the Dakotas. DR. L. D. LEONARD, Sec.
WM. RUSSELL, Pres.

Missouri.—The Missouri State Bee-Keepers' Association will meet in Mexico, Mo., Dec. 15, 1903. J. W. Rouse will act as host to direct the attendants to the hall, which is free to all who desire to attend. Board may be had at the leading hotels at $1 to $2 a day. Come, everybody who is interested in bees and honey. Let us have a big meeting. We now have 51 paid-up members. Let us make it 100. Procure certificates from your local railroad ticket agents when you purchase your tickets. It may be you can return for ⅓ fare.
W. F. CARY, Sec. J. W. ROUSE, Pres.

Canada—The annual meeting of the Ontario Bee Keepers' Association will be held in the Town Hall of Trenton, Ont., Tuesday, Wednesday and Thursday, Dec. 1, 2 and 3, 1903, beginning at 2 p.m. on Tuesday. On the program are the following:

"The Advantages of Out-Apiaries; How, When and Where to Move Them," by B. O. Lott; "Shook Swarms," by Morley Pettit; "The Benefits of Organization and the Extension of the Markets," by F. W. Hodson, of the Agricultural Department; "On the Storing of Comb Honey," and "Experiments in the Preparation of Vinegar from Honey," by Prof. Frank S. Shutt;" "Address on Experiments," by John Fixter, of the Experimental Farm. There will also be an address by Prof. James, Deputy Minister of Agriculture of Ontario. A report of the Ontario Honey Exchange will be given and discussed. Messrs. Morley Pettit and C. W. Post will have charge of the Question Drawer. The evening of Dec. 2d will occur the annual banquet.

Persons having any new or practical inventions are invited to bring them to the convention and place them on exhibition to show their practical uses. There will be a place for showing these articles.

All persons going to the convention should purchase a full-fare single ticket from the agent at starting point, and get a standard certificate, and if sufficient attend and hold these certificates, the return fare will be one-third, according to the arrangements made with the different railway companies, or, if under 50, two-thirds single fare.

The leading hotels—the Bleecker House, St. Lawrence Hall, and the Hotel Aberdeen—will give a rate of one dollar per day.

A very cordial invitation is extended to all presons interested in bee-keeping to attend and take part in the discussions.
Streetsville, Ont. W. COUSE, Sec.

Establisht in 1861
AMERICAN
BEE JOURNAL
The Oldest Bee-Paper in America

43d YEAR. CHICAGO, ILL., NOV. 26, 1903. No. 48.

Editorial Comments

The National Bee-Keepers' Association.

General Manager France, we learn, is preparing a very elaborate Annual Report, which will be mailed to members early in December. He has done an immense amount of work in the interest of bee-keeping and bee-keepers all over our country. Already there is a membership of over 1600. This ought to be made 2000 by Jan 1. Why not? Surely, there ought to be 400 among the readers of the American Bee Journal alone that would join during the next month! We will be glad to receive and forward the dues ($1.00) for any who wish to send to us when renewing subscriptions. Mr. France reports that "members are joining fast now." Two joined in Texas at the close of a lawsuit in which the Association won—as it usually does.

The forthcoming Annual Report of the General Manager will tell all about the work done by the Association during 1903. It will be mailed only to members. So, if you want a copy, and also desire to cast your vote in the election held in December (next month), you will need to send your dollar in *at once*, if not now a member. If you prefer, send dues to N. E. France, Platteville, Wis.

There are in the neighborhood of 30,000 bee-keepers who are subscribers to bee-papers in America. And yet only about 1 in 20 of them is a member of the National Bee-Keepers' Association. If it were 1 in 10 the membership would be 3,000. It seems to us that it ought to be an easy matter to get 1 in 10 to become members, especially when the Association is doing such good work in the interest of all bee-keepers. In view of such work, does it look right—*is* it right—that 1600 should bear all the expense for 700,000, which is the number of bee-keepers reported by the last census?

We wish that every reader of the American Bee Journal were a member of the National Bee-Keepers' Association. We are not asking anything in this for ourselves. Only that the bee-keepers might more generally help themselves, and the whole bee-keeping industry, by becoming members of their National Association.

How to Drive Hive-Staples.

When driving staples to fasten a hive-bottom to a hive, one can do it in a right way or a wrong way. The object is to have the hive so fastened to the body that there shall not be the least chance for the hive to slide back and forth on the bottom. If the staples are driven in straight up and down, unless there be an exceedingly tight fit there will be at least a little chance for the hive to slide back and forth. Four staples should be used, driven into the sides, near the ends, and the two staples on one side should be slanted in opposite directions, with the same amount of slant. Then there will be no chance for the hive to slide on the bottom.

Salt and Lime for Bees.

"Salt and air-slaked lime should be put convenient to bees," says the Australian Bee-Bulletin. The partiality of bees for salt is well known, but isn't the lime a new suggestion? What do the bees do with it, Mr. Tipper?

Don't Neglect Your Drone-Breeders.

Too many bee-keepers pay little or no attention to the improvement of their stock, allowing the bees to swarm pretty much at their own will, the swarming settling the matter of the new queens that are reared. Of those that make some effort at selecting, probably the majority look out for the queens alone, paying no attention whatever to the matter of drones. It should be remembered that it is just as important to have a good father as to have a good mother. Decide now a certain proportion of your colonies which are best, breed queens from the best one, and rear drones from the others.

Late Flights Before Cellaring Bees.

The rule sometimes given as to the time of putting bees in cellar—a rule perfect in theory, but not always easily put in practice—is to put them in immediately after the last flight they will have before winter sets in for good. Speaking of this, Editor Hutchinson says in the Bee-Keepers' Review:

> While I would leave them as long as I thought there was a *reasonable* chance for having another flight, I don't attach so very much importance to these extra-late flights. After the bees have settled down for their winter nap, they are consuming very little honey. The matter of two weeks does not use up much honey.

True, the matter of two weeks does not use up much honey, but if bees consume twice as much on the summer stands as in the cellar, that two weeks is equivalent to four weeks' consumption in the cellar. It may also be said that bees in the cellar do not consume an enormous amount in four weeks; but there is another way to look at it. The trying time of confinement comes in early spring; not because it is spring, but because of the length of confinement. The bees have been confined so long that two weeks more will mean disease, four weeks more disaster. It is the last end of the confinement that tells—the last straw that breaks the camel's back. Now, please remember that two weeks more on the summer stands without an after flight practically adds two to four more weeks' confinement *at the last end*, and that two weeks will seem no trifling matter.

The Weeds of Ontario.

This is the title of Bulletin No. 94, issued by the Ontario Agricultural College, at Toronto, Ont. It contains about 100 pages, written by Prof. F. C. Harrison, and revised by Prof. Wm. Lockhead. In the introduction to this revised edition, we find these words:

> "On account of the increasing demand for information regarding *weed-seeds*, it was deemed advisable to incorporate into this revised bulletin some information regarding the identification of the common weed-seed impurities which are found in commercial clover and timothy seed. A few additional weeds are described, and the *methods of eradication* are in many cases given in greater detail."

It is a very interesting pamphlet, and should be of immense value to the farmers of Ontario.

It says: "A weed has been defined as any plant out of place; and in that sense, a wheat-plant in a field of turnips is a weed." From this view, we suppose, the following is said concerning one of the best honey-plants in the world:

> SWEET CLOVER (*Melilotus alba*).—The white sweet clover is a very common plant in vacant grounds and neglected fields about cities and along roadsides. It is a tall, rank-growing plant, and thrives best on heavy clay soils. It may be classed among the weeds, inasmuch as it grows where it is not wanted, but it can not be considered a noxious weed. As a soil-former, sweet clover is a valuable plant. It roots deeply, and is a nitrate producer. With the aid of the rains and

> frosts it gradually mellows the soil of unproductive clay, and makes it fit for cultivation.
>
> It is a biennial. The shoots of the first year's growth are tender, and are valued in the South as fodder for stock, but those of the second year are tough, fibrous, and branching, and bear the flowers which are very attractive to honey-bees. In some districts sweet clover is grown extensively by apiculturists. The number of seeds produced every year by each plant is very large. Experience shows that sweet clover is not difficult to control. It grows altogether from the seed. If seeding is prevented by cutting down the plants at blossoming time, very few plants will make their appearance the following season.
>
> Although a fodder-plant in the South, sweet clover is not relished by stock in Ontario. On account of the tough, fibrous structure of the second year's growth, there is a possibility that the plant may in a few years be grown for the manufacture of binder-twine, etc.

Should it be proven that sweet clover can be profitably used for making twine, surely here will be something that has long been looked for by bee-keepers—a plant that has value aside from the nectar which it yields.

If we remember correctly, sweet clover seed is valuable for certain purposes.

Who knows but the much-despised sweet clover will yet win its way to power and fame?

Pick Out Your Breeders Now.

"Breed from the best" is a pretty safe motto," and it may be better now than later to decide which the best are. If you have made no definite record of the performance of each colony, by the time you want to start queen-rearing next year you may have only a hazy remembrance of it. So it is better to defer your decision no longer, and after having made the decision you should put it down in black and white, or else mark in some way the hive that contains your best queen. Also mark several others of the next best. Something may happen to your best queen, so that you will want to use the next best, and in any case you will want to know several of your best colonies which are to be encouraged to rear drones, drone-rearing being discouraged in other colonies.

Weighing Colonies.

If you want to weigh your colonies before leaving them to their winter's repose, you can do it by means of a platform scale, but it is a quicker job to use a spring balance. Suppose you have decided that before going into the cellar each 8-frame hive with its contents, cover, and bottom-board must weigh at least 40 pounds. A rope is slipped over the hive in some way—if you have cleats on the ends an endless rope is passed under each cleat—the hook of the spring balance supports the rope, and a tough stick used as a lever supports the spring balance, the short arm of the lever resting on a light frame-work of sufficient elevation.

It may not be necessary to weigh all the hives. Hefting may answer for most of them. Practice will help to decide by hefting when a hive weighs considerably more than 40 pounds, and such a hive does not need to be weighed.

The use of a little more strength, however, will enable one actually to weigh all and do it expeditiously. Have the spring balance supported by a broad strap about the neck, and you can lift the hive by the spring balance just about as easily as you can heft it. Have an assistant to call off the weight. Lift slowly, and whenever the index of the balance passes the 40-pound mark, the assistant calls out "Stop," thus saving unnecessary lifting. Of course, the same principles will apply if some other weight than 40 be the limit. When thus weighing, it may be convenient to use a long staff or stick to help balance or support one.

Selecting Colonies for Next Year's Breeding.

Not a colony, but colonies; for it is not safe to depend upon a single queen—she may die—and several colonies are wanted for drone-rearing. At first thought it may seem a very simple thing to make the selection: Suppose No. 17 stored the past season the most surplus, 200 pounds; No. 23 stored 180 pounds; Nos. 85, 64, 94 stored, respectively, 176, 173, and 160 pounds; these being the best in the apiary, so why not rear queens next year from No. 17, and drones from the others? Well, it isn't so simple a matter as that. In spite of the superior yield of No. 17, it may be that it would be better to rear queens from either of the other four. It may be that No. 17 superseded its queen late in the season, and that the new queen has met a very inferior drone, so that next year the colony may do only mediocre work. You may as well take some time to the matter. Sit down one of these long evenings with your memoranda before you, and give the matter the attention which its importance merits.

First, make a list of colonies giving the largest yields, putting them in the order of their superiority. If one of them has changed queens during the season, that throws it out of the count, although if the change was made very early in the season the colony may be entitled to some consideration. It may be that one giving an extra yield had in some way an extra chance, as by having brood or bees given to it. It may be that brood or bees were taken from it, for which allowance should be made. The record of previous years should be noted. A colony with a good record for two seasons is better than one with a record for only one season, always supposing that the same queen has run through the two seasons.

If comb honey is the object, it is worth while to note whether a colony has done good work in finishing up sections that are nice and white in every respect.

All these things should be carefully considered along with gentleness, inclination to swarm, etc., and the choice made accordingly; and it is better to make that choice now than later.

Zinc for Hive-Covers.

This is favored by some. More expensive at the start, but it lasts, and there is no question as to its being rain-proof. If it will last a goodly number of years without paint; it may in the long run be the cheapest thing that can be satisfactorily used.

Miscellaneous Items

Mrs. Morrill Dunn, of Chicago, read a short paper on bees at her residence on Nov. 5, to a group of young women who had formed a literary and social club. Through the kindness of Mr. Whitney (of Brookside Apiary, in Wisconsin), and a Chicago friend, she was enabled to show a complete hive, several combs, and a queen-bee with attendant workers. The properties were very interesting, and helped those who had read Maeterlinck's book to place things; and awoke great interest in those who had not a faint understanding of the wonderful system belonging to the most marvelous little creatures the world has to show.

……

The Minnesota Convention, which meets Dec. 2 and 3, in the First Unitarian Church, cor. 8th St. and Mary Place, Minneapolis, has a most excellent program. Every bee-keeper of that great State should "get there," if at all possible. Among the papers and subjects to be read and discussed are these:

Wintering Bees Outdoors in Manitoba—Dr. C. M. Vanstone.
What is the Best Way of Extracting to Prevent Increase and to Get the Largest Amount of Comb Honey?—N. P. Aspinwall.
Pickling with Honey-Vinegar and Honey—Miss Mary Moeser.
Out-Apiaries and "Shook" Swarms—F. A. Gray.
Co-operation Among Bee-Keepers—Walter R. Ansell and S. Lindersmith.
A Ramble on the Pacific Coast with a Little About Bees and Bee-Keepers' Conventions—Mrs. H. G. Acklin.
Some Reminiscences in Bee-Keeping—J. P. West.
Bee-Keeping from a Woman's Standpoint—Mrs. W. S. Wingate.
Queen-Rearing—G. R. Frye and F. A. Crowell.
Honey Exhibit at the Minnesota State Fair—N. S. Gordon, Supt.
How to Produce a Fancy Grade of Comb Honey—Dr. E. K. Jaques.
Anatomy of the Honey-Bee, and Bee and Fire Blight (Pear Blight)—F. L. Washburn, State Entomologist.
Bee-Keeping as a Side-Line—Geo. A. Forgerson.
Transferring Bees from Logs to Modern Hives, and Getting Rid of Robber-Bees—Wm. Cairncross.

……

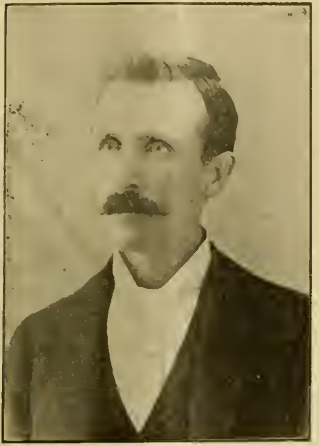
Four-Piece Sections are advocated by Editor Hutchinson, and he thinks the time now ripe for some one to make a specialty of their manufacture, and push them.

……

California Bee-Keeping is thus commented upon by our good friend, Mr. W. A. Pryal, of San Francisco Co., Calif., in a letter dated Nov. 11:

> DEAR MR. YORK:—The reports of the Los Angeles convention, as given in the American Bee Journal, have been interesting me of late. Last week I read that part devoted to the talk by "Uncle Amos," and this week I was an attentive reader of the reminiscences of Mr. Harbi-

son. Of a good deal of the latter's work with bees in this State I have been familiar, as I, some time ago, collected all the information I could about the early history of bees into this State. I am glad he was "drawn out," as he had heretofore kept his "light hidden under a bushel." Little has he given to bee-keepers since he pubished his book, the "Bee-Keepers' Directory." He has been a great bee-keeper, and it is too bad for the fraternity that he did not do more writing, especially for the bee-papers. His book was a good one. While it is out of print, I have seen a few copies of it around some of the second-hand book-shops. That is where I procured my copy, as well as one for a friend.



W. A PRYAL.

I notice. that Mr. Harbison came to this State in 1854, the year my father came, I believe. Both were engaged in the same business, my father being located at first in San Francisco, and afterward in Alameda county, then what were portions of Contra Costa or Santa Clara counties. Mr. H.'s remarks about getting $1.00 a pound for honey reminds me of some of the early settlers telling me that they saw a single peach sold for $1.00. My father told me that he sold ordinary varieties of roses in the 50's, in this city, for $10 the plant. Strawberries sold for more than $1 a pound in the early days. All this seems strange to us Californians of the present day, when fruit is about the most common product of the soil we have, and can, at times, be had for almost nothing. And here honey has sold for less than it does in any portion of the world, in all probability.

Mr. Harbison voiced splendid advice when he called for the planting of honey-secreting plants. I have contended for a quarter of a century—it begins to make me feel old when I speak of such a long period of time—for the planting of honey-producing trees and plants. It was in 1877, I believe, I drew attention to the fact that the eucalyptus was a great honey-producing tree. This fact may have been noted by others before I mentioned it in the bee-papers. I am glad that the tree is now fully recognized as a boon to apiarists.

I firmly believe that alfalfa will be one of our great honey-plants scattered all over the State. I find that it is now growing in all manner of out-of-the-way places. Birds and other animals are sowing the seed far and near. In time it will be found growing wild on the highest hill-tops, as well as in the valleys. I find it growing in the most unlooked-for places in Alameda and San Francisco counties. It behooves bee-keepers to scatter the seed by roadsides and other places, which will then become distributing centers, so to speak. A good place to sow the seed is well up in the hills and mountains near a stream. In this way the seed from the plants that will thus come into existence, will work their way downward and edge the stream with a garland of alfalfa for the bees to revel in—first, away up on the hillside (if it is a sunny exposure), and later in the valley below.

There is no doubt in my mind but the whole of California is a big bee-garden. The central and northern portions of the State have the advantage, owing to the fact that they are better supplied with rainfalls. While as much water-white honey may not be produced northward at present, I believe the time is not far off when color in honey will not cut much of a figure so long as the article is of good flavor. To my notion, some of the amber-colored honey I have tasted surpassed any of the so-called white honeys.

We are having nice rains. They came late this season. The grass on the hills and valleys is shooting up rapidly. If you were here now you would not find things as parched as they were when you were here in August—in the middle of our dry season. Mind you, when you saw some of the lower counties you saw but a very *small* portion of our great State. Just remember there are some valleys that are green the year around. There is the Pajaro valley, about 100 miles south of here, in Santa Cruz and Monterey counties, that is as verdant the year around as the Emerald Isle, and where the fine apples that tickle the palates of Londoners are shipped from, to a great extent. Then its strawberries and other small fruits are favorities in the San Francisco markets. 'Tis a great producer of sugar-beets, butter, cheese, etc. Then portions of Humboldt county has its rich valleys that never fail of crops. While the rainfall of the south end of the State may be five inches, the precipitation in that County may, as it often does, amount up to 80 or 90 inches. Wonderful things happen in California!

Then along the Sacramento and San Joaquin rivers there are vast tracts of land where wonderful crop-yields are harvested annually. In these valleys bees are not known to die of starvation, so I have been told. But once in a while they have been drowned by overflows.

In mentioning the eucalyptus I may say, in passing, that I found the inclosed clipping in the editorial columns of this morning's San Francisco Call.

Yours very sincerely,
W. A. PRYAL.

The clipping mentioned by Mr. Pryal reads as follows:

TIMBER AND BEE-FEED.

The Pacific Fruit World turns to the varieties of eucalyptus tree to insure in California the amount of bloom necessary for bee-feed. The honey-industry is a large one. Sometimes the fields do not suffice to make what is considered a full crop. How is this defect to be remedied? The Fruit World says simply that the planting of a proper number of eucalyptus trees is all that is requisite.

There is something novel in the proposition to cover the land with trees of the size of the lofty eucalyptus to serve the minute, buzzing honey-makers. It does not follow from this suggestion, that because the idea is new, it is not practicable. Indeed, the Fruit World cites facts that are at least interesting in support of its scheme.

There are a sufficient number of varieties of eucalyptus known to California to provide blooms during every season in greater or less quantity. When the flower-bearing plants and shrubs fail to contribute their full quota of nectar, the eucalyptus would be invaluable, so estimates the Fruit World. "It is possible," says the editor of the journal, "to make such planting of eucalyptus trees as to secure from them a succession of bloom which will, in addition to their use as fuel, give ranges for the honey-gatherers."

The Eucalyptus callophylla and the Eucalyptus acemenoides are in flower from July to October. The first-named is the bearer of white blossoms. The Eucalyptus cornuta, which is well known by its affluence of yellow flowers, follows closely after the callophylla in time of blossoming. The Eucalyptus corymbrosia has the same season practically. The Eucalyptus exima, a low-growing tree, reigns florally from September to December. The Eucalyptus punctata, famed for withstanding drouth, is an October bloomer. The most brilliant of the eucalptus family is the ficifolia, but its season is short. On the adobe hills the rudis thrives. At all seasons the occidentalis proclaims its name through its crimson adornments. Then there are the Leli mellidora, that is rich in honey; the lehmani, the paniculata.

Seeds and trees, it is said, are available to start all the plantations that may be required. The eucalyptus has retained its popularity variously in this State during many years.

Tall groves make wind-breaks to shield orchards of deciduous and citrus fruits in many localities. Long avenues of shade attest its desirability in another use. Stout cord-wood it makes to enhance the joys of home, as it is consigned to the open grate. Medicinal qualities inhere in it, and many men bless its oil. It has been employed to furnish material for cleansing the interiors of steam-boilers. Now, humming through the ambrosial air of California, the nectar-gathering bee may add its note of cheerful praise for the boquets of flowers raised high above arid lands by the eucalyptus' aspiring and mast-like trunk as a source of a table dainty.

The above is right in line with Prof. Cook's article on another page. Wherever the famous eucalyptus will grow, we should think that bee-keepers would aid in planting it. Its honey is delicious, of excellent flavor, thick in body, though rather dark in color. But as Mr. Pryal well says, color in honey will be of less importance as time goes on. Color in honey is now, and has been, a fad which we are certain will pass away like many another senseless fad.

* * *

A California Trip Correction comes from Wisconsin, in the following:

DEAR BROTHER YORK:—Didn't that coyote "convention," the altitude, heat, "Max Jenney's talk," or something, get you a little "mixed" when you announced in the American Bee Journal of Oct. 1st, that you traveled through the New Mexico desert after leaving Williams, and through the Arizona desert after leaving the Needles, on your way to Los Angeles? Have traveled over the Santa Fe route four times, and never found it thus. Perhaps there has been a big earthquake since I was there. It used to be Arizona from Williams to Needles, and California the rest of the way to the coast. Don't wonder "Max" failed to tell you that that 250 miles of the worst deserty kind of desert, from Needles to San Bernardino, was all California—beautiful, "blooming" California—or that you failed to discover it for yourself. Why, I lived in San Bernardino County more than three years before I discovered it, or even knew that it was all San Bernardino County from Needles to Los Angeles! There are some big things in California besides trees and liars.

Your description of "Max" was particularly good. Did you happen (?) to meet his twin brother, "The Real Estate Agent?" Of course you did; the deserts are full of him. You were not there long enough to *see* and *learn* everything. Still I have known people to stay there less than a week and *know it all*, or *think* they did, when, in fact, the amount they *did not know* would have made a large encyclopedia.

There are some curious things growing in those deserts besides yucca, cacti, horned-toads, etc. I am going to send you something I "*grew*" there, without any irrigating. I call it "A California Welcome." I hope you will excuse me for calling you "Brother," but, the fact is, my husband is a bee-keeper, as was his father before him, and bee-keeping seems to "run" in the family.

An Ex-Californian, with a big X, MARY B. HALL

Yes, Mrs. Hall, you are right in your correction.

See page 762 for that "Welcome."

Convention Proceedings

THE LOS ANGELES CONVENTION.

Report of the Proceedings of the 34th Annual Meeting of the National Bee-Keepers' Association, Held at Los Angeles, Calif., Aug. 18, 19 and 20, 1903.

(Continued from page 744.)

FOUL BROOD, BLACK BROOD, PICKLED BROOD.

Question—What is the difference in the symptoms of foul brood and black brood in the appearance and development of the diseases? Are they two distinct diseases, or but one?

Mr. France—A comparison of foul brood and black brood shows that foul brood always has that brown color, a little darker than in healthy brood, the dead larvæ of a light color, and, as it is termed, ropy. At this stage, if you run a match or toothpick into it, this dead larvæ will draw out with an elasticity like glue. And, by the way, it smells like a furniture glue-pot. It has that old, disagreeable foul-brood odor. If it were black brood it would be very much darker, and the odor would be like a rotten, sour apple in an old cider-mill. It is somewhat more of that nature. It attacks the larvæ earlier in the life of the bee, and those affected turn a very dark brown, almost black, and die. Now, I never knew foul brood to have that peculiar characteristic, but when you go into it in the finer details, under the magnifying glass, the germs of the diseases have a very strong resemblance. They are each of them rod-like, and each of them throws out spores, and thus propagates. In that particular feature they seem to be alike. It seems to be a little harder in treatment. I believe I was the first to go beyond Mr. McEvoy in the treatment of foul brood, caging the queen while making the treatment. I did have a few cases where the colony was so dissatisfied that they deserted their home and went into neighboring hives, queens and all. They were fed liberally, and they stayed away. I avoided that trouble by caging the queens. New York bee-keepers have followed in the same line, treating black brood as foul brood, and caging the queen, and have even gone further and caged the queen for two days longer. All that is necessary is to get the diseased honey out of the hive into clean quarters.

Question—What is the cause of pickled or black brood? Is it contagious?

Mr. France—I feel that this subject of pickled brood is one of vital importance, because it has created in my own State a great deal of anxiety, and it has been quite serious. As to the cause of pickled brood, I have fully convinced myself what it is, and what causes it. In a little leaflet that I issued for Wisconsin bee-keepers, I described black brood and pickled brood. I do not know but I might as well read this as to try to give it in any other form. Your season here is earlier, so these dates would not correspond with conditions here:

"The larval bees (in Wisconsin the last of May and through June) show light-brown spots; a little later the cappings have small holes, they are not sunken or dark-colored as in foul brood. The dead bee will be at first swollen, with a black head, dried to a hard bunch, and often turned up Chinaman-shoe like. The skin of the dead bee is quite tough, and, if punctured, the thin, watery fluid of the body will flow as freely as water, often a little yellow or brownish colored from the dissolved pollen from the abdomen of the bee. It has very little or no smell, does not at any time stick to the walls of the comb, is easily pulled out of the cell, is never ropy or sticky, and, if the colony is properly cared for, the bees will take care of themselves. Plenty of liquid unsealed honey and pollen near the brood, and hives so protected as to keep bees and brood comfortable on cold days and nights."

So much for pickled brood. Now, what causes it? Cold, backward spring weather, when the bees can not get out and fly, causing a shortage of food, is the cause of nine-tenths of it in the State of Wisconsin. For instance, in this State, last spring, you probably had some cold, backward weather. Then came on beautiful weather, and brood-rearing commenced, the honey-flow came on about the time of the honey-flow, and pickled brood would appear. That pickled brood may have started before you saw it. It is lack of nourishment and care of the larval bees. Just as we people first look out for our own stomachs, then those of our neighbors', so these bees, if they can not get out to work, will subsist upon the honey in the hive. There may be lots of solid honey in the hive, but the brood may be starved or chilled, and these conditions may produce a case of foul brood, or, under these circumstances, pickled brood. I do not believe a case of pickled brood ever produced a case of foul brood, any more than diphtheria produces small-pox.

What shall we do to get rid of it? Strengthen the bees so that they will have an abundance of honey. That is all there is to it. In one apiary where there were 80 colonies, and they had foul brood in a colony, I took every other hive, and simply gave those colonies an abundance of feed, and let the others go as they were. In ten days time, the colonies that were given the extra honey had carried out the dead, but the others were dwindling down, and there was more and more pickled brood. Then, in the same yard, I cautioned the owner, just during the time between fruit-bloom and clover, about ten days there that the bees do not get any honey; I said, "Don't you let them know anything about that famine time. You feed them those ten days, so that from the time there is no fruit-bloom there is something for them until the clover comes on." What was the result in that apiary? There is not a case of pickled brood there.

I don't believe foul brood and pickled brood are alike. Nor do I believe that black brood and pickled brood are one and the same. But there is another condition of affars tha seems to corroborate it. I have had several samples, and there is one here in this box. There is a condition that is rather serious, and it has a similar appearance to foul brood at some stage, but, owing to climatic conditions, or something, I have been unable to have an analysis that is to my satisfaction, to know what you would call it. We must take these conditions locally, and I would want to understand your conditions here before I could do it satisfactorily, but I believe you Western people will go after it and correct it.

How does it differ? Not so much brown, but more nearly black. It bears down loosely, and you can touch the comb up with a little pair of tweezers without any trouble.

Do the bees carry it out? In some localities they do. They say in Washington and Oregon the bees seem to carry out a good deal of it.

A Member—We have a modification of foul brood here; the color is darker, but the substance is not very elastic, but I have been thoroughly convinced that it is simply a modification. It is quite common here the last few years.

Prof. Cook—I have been very much interested in what has been said here in regard to pickled brood. We had a great deal of brood dying here in this way. I did not call it pickled brood; we called it a new bee-disease. We did not have much of it. You have diagnosed it exactly, Mr. France. I believe it was a case of starvation, or, any way, malnutrition.

Question—I would like to ask, where Mr. France says "contagious," if he means that it can be carried like cholera or yellow fever, or does he mean infectious, like carrying some of the spores from an infected hive? I would hive them, and they would set along in a row near my barn; as I had no particular use of that I would allow them to remain them. I had a colony nearly perish with foul brood before I discovered its presence, but had hives within 6 inches of it where foul brood never appeared; but as I arrested the progress of the disease by removing and burning up the others, I concluded "contagious" did not apply, but that it is infectious. I want to know whether he does mean infectious.

Mr. France—His question was, "Do I think the germs of foul brood float in the air, and in that way would infect another colony?" No, I do not. In that case, why would not every cell in that comb be infected? I very seldom find a comb where all the cells in the comb are infected, even though some will have it in the last stages of the disease. I have taken the stand where a good many have called me down, but I am just as willing to be called down when I can be proven to be in the wrong.

How fast, and what will spread the disease? I contend that the comb having the disease in certain cells, when honey, larvæ, pollen, or anything the bees deposit is put into those cells, that material becomes infected. The next cell may never have had foul brood in. It is contagious only when it comes in contact with the disease. And brood-combs are safe to use from a diseased colony where they have gone up and stored their honey, and there has been no brood reared in those combs. I believe there is no danger. I will tell you what I did a few days before I left home to come here. An apiary of 68 colonies, all of them with the disease; the hives were three or four stories high, extracting combs above. It did seem a shame to destroy all those combs. I said, "Don't do it. We will fumigate all of these." But the ones below, where there was disease, I said, "This is worth much more for beeswax, and we will use some new sheets of foundation."

By the way, with a German wax-press, you can take your combs and render out almost enough wax to pay for the new foundation.

Question—Would you hesitate to use a hive that had had the disease in it?

Mr. France—No, not unless that hive had had foul-broody honey daubed upon its bottom. In that case, I would want to scrape or boil it thoroughly. Seven years ago I disinfected hives, scraped and boiled, and even took kerosene and burned them out. But I would not want to live in a house with the walls all charred and black, and I do not believe the bees do. Now, I put the bees back in the same hive, simply scraping it. Those cells were clean, and I do not believe there is any danger.

Question—What amount of boiling would you give them?

Mr. France—I simply immersed the hive in the boiling water sufficient to melt the wax.

Question—I would like to ask how the foul brood is usually conveyed? also, if it would eradicate the disease to cut out certain parts of it and have the combs recleaned, simply cutting out those portions of the comb that contained foul brood?

Mr. France—I have agreed in some cases, where there seemed to be but little of it, only one or two cells of foul brood in the comb, or perhaps eight or ten in the entire hive, to cut out and remove the diseased parts, keeping track of the hive, and in a majority of cases that has been all right; where it was not, I fear there was something covering up some that I did not see. It is a risk, however, for we can not see what is covered up.

Question—I would like to ask how it is conveyed from one apiary to another, usually.

Mr. France—It is conveyed largely by robber-bees, and the bee-keeper's manipulating.

Question—Is it not a fact that it has been conveyed from one apiary to another several miles outstanding, at a time of the year when robber-bees do not work?

Mr. France—I would have to get after back-track history there before I would want to admit all that.

Mr. Corey—We used to boil the hives, but it was very bad on the hives, because when they got dry they would get loose. We abandoned that plan a long time ago. We had a very eminent chemist with us at one time, and he recommended the use of bisulphide of carbon, and told me to buy a can of gasoline and put 25 percent of bisulphide of carbon with it, and take a brush and go over the inside of the hive and give a thorough treatment to the cover, and we would save our hives, our nails would all be intact, and our beautiful white painted hives, and he said it would be impossible for any spores, no matter what kind, to exist in that bisulphide.

Question—Would comb honey on top of the hive, produced from diseased bees, be safe to use or feed to other bees?

Mr. France—I think it would.

Question—Two years ago we had a case of foul brood. The lady asked me if she could feed the bees with that comb honey that she had; I told her I thought she could; we fed that back again, and the next year, or rather last spring, they moved away and sold their hives to some one else, and they were just literally grown up with foul brood. I think, unless they got it from some one else, it came from that comb honey.

Mr. France—I would get after back-track history again. In Wisconsin a man bought an apiary because he got it cheap; in due time it was united with his other apiary, and that yard dwindled down until it was half gone with foul brood. He treated it with the McEvoy plan. The next spring, as soon as brood-rearing got nicely started, he treated it again; altogether he treated that apiary seven times, and the disease would re-appear. He said, "I guess I had better quit the business." He tried to get legislation to help him, but he could not. He stood alone. He went before the legislature, and was ridiculed and laughed at. Then, through the State Bee-Keepers' Association we got legislation. Otherwise we never would have gotten it. So much for the State Association. How much quicker we would have gotten it had we had a National one! I went to this apiary, and there were about four car-loads of empty hives. I went inside of the apiary in a neighboring yard, and there was foul brood and no attempt to get rid of it. What was the use of treating when his neighbor would not treat?

Question—What is the difference in the symptoms of foul brood and black brood, in the appearance and development of the diseases? and are they two distinct diseases, or but one?

Mr. France—I intended to bring some samples of enlarged cells of black brood, foul brood, and pickled brood. But black brood is always black, and head under, sharp-pointed, a little turned up, and quite hard. Pickled brood, the lower end light brown, thick skin, and the bottom end apparently a water-bag, as you would take hold and pull it out, which is easily done, as it is never ropy or sticky, and you puncture that skin and the fluid will run as freely as water. If it is black brood, that little bee would cover up about half to two-thirds of the bottom of the cell; it turns brown, or nearly black, with white streaks running near the center. It doesn't come out and get this sharp end to it like pickled brood at all.

Question—Do you think it is safe to feed bees comb honey from hives that have been treated for pickled brood, or black brood?

Mr. France—I would not use it for that purpose, unless I had heated it.

B. S. Taylor—I own three apiaries in part. One apiary had foul brood; in every case, where they fed this honey, it produced foul brood, for all of these had foul brood the next year. In regard to cutting out combs, one man, five years ago, had 240 colonies. Wherever he found a symptom of foul brood, he cut it out or burned it. Last year he got down to 56, and I found 28 that had foul brood. Now he has 11. Another man has been cutting down 100 colonies, and has been cutting out and burning them. I said, "In my opinion you will find 20 cases next spring."

Question—Is black brood as contagious as foul brood?

Mr. France—Yes; even worse.

Question—Will it cure itself?

Mr. France—Not until the bees are dead.

C. J. Davidson—To what heat would you subject honey in order to make it safe in feeding bees—honey that you are suspicious of—simply bring it to a boil to eradicate the germs?

Mr. France—Many have misunderstood that term "boil." I have had considerable correspondence in regard to Dr. Howard's treatment of that. He used dry heat. In boiling, I invariably stir so as to bring the center of the can to the boiling surface, so that it all gets heated. You may take an ordinary-top milk-can, which is common upon the farm, set it on the stove, and if you do not stir the contents you will find the center of the can has hardly been heated through, while it is apparently at the boiling point. One man said, "Any man can see that is boiling." I said, "You haven't killed the foul brood in that." I put my hand down deep in that and it didn't burn. I believe in thorough stirring. When it has all been boiled, and all brought to the surface, it will be safe to use to feed the bees. The germs will then all be killed.

Mr. Corey—You don't believe it is necessary to cook it two or three hours, do you?

Mr. France—No.

(Continued next week.)

Honey as a Health-Food is the name of a 16-page leaflet (3½x6 inches) which is designed to help increase the demand and sale of honey. The first part is devoted to a consideration of "Honey as Food," written by Dr. C. C. Miller. The last part contains "Honey-Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by every one who has honey for sale. It is almost certain to make good customers for honey. We know, for we are using it ourselves.

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Contributed Articles

Roadside Tree-Planting and Reforesting.

BY PROF. A. J. COOK.

MUCH has been said in the past in the "Old Reliable" on this important subject. However, too much cannot be said, for there are very few topics discussed in our journals that are more important, or that more deeply concern our entire people than this.

It is a well-known fact that our climate, both as to temperature and rainfall, has greatly changed since our country was first settled. The extremes of climate are much more marked, and we all know that with extremes, either of heat or cold, often comes disaster. Extremes of rainfall are also of startling frequency during late years. The drouth dries up the crops, and brings distress often to a wide range of our farming population. The terrible floods that come with the frequent downpours are even more distressing. Millions of dollars worth of property are swept away, and human sacrifice often brings wide-spead sorrow. There must be some common cause for these unwelcome changes. Whatever cause it is, it must be something that is very profound and far-reaching. We can hardly conceive that the cultivation in the soil is enough in itself to have effected this change.

The only other thing that we can suggest is the wide-spread and unfortunate depletion of our forests. If this can effect or bring about this change, then, surely, we have an easy explanation, for the denudation of our forest areas is something tremendous. The destruction of our forests during the last generation has been great, beyond compare. It is easy to believe that the presence of great forests in holding the rainfall, in moderating wind, in staying heat radiation from the earth, may have just the effect to moderate temperature and equalize moisture. I believe it is the consensus of the best educated men along the lines of meteorology, that the cutting away of our forests has brought these disturbances, and brought upon us these terrible extremes.

If the suggestion made above is correct, then certainly it is none too soon to begin the work of restitution, by commencing the wide-spread and wholesale tree-planting. I believe it is safe to assert that nothing that we can do will give so much hope in way of climatic improvement as general reforesting of much of our land area. Surely, it is none too soon for every one who owns any land, whether it be farm, or city lot, to begin the work of setting out trees. If we could all become sufficiently impressed with the importance of such action, we would all become at once tree-planters, and I believe we would perform a patriotic work, for which we would rightly receive the blessing of all the coming generations.

There is another argument, hardly less persuasive, which favors immediate action in this direction. How beautiful is a country or city where trees are much in evidence along street or roadside. Cambridge, in Massachusetts, New Haven, in Connecticut, and Riverside, in California, are illustrations of the value of tree-planting as a matter of æsthetics. The country, too, where all roadsides are adorned with trees is always sought by the would-be farmer. The advanced value which city or village lot or country farm attains upon the presence of trees, is sure evidence that beauty has a hold upon our people. It should be so. Anything that develops taste or love of the beautiful advances civilization and fosters good fellowship. Here again, then, we should all take a lesson and become enthusiastic supporters of any action which tends to increase the trees along our streets and roadsides.

The bee-keeper is also very greatly interested in the planting of trees. We all remember the great reputation which the famous Mohawk Valley of New York, and the great linden regions of Wisconsin, secured in bygone years because of the immense honey crop. This great yield of honey came almost as surely as the season, and a maximum crop was usually expected. With the change of climate, and the disappearance of the trees, the honey product is not only greatly diminished, but is far more precarious. It is hardly to be hoped that we can ever bring back anything like the old-time basswood forest, but if every one would inform himself as to the necessity of reforesting our country as far as possible, and urge action to secure it, in season and out of season, we certainly should do very much, not only to improve the climate of our country, the beauty of our landscape, but also to effect a great increase in the honey-product of the land.

Without doubt there is going to be a great impetus in this direction of more extensive setting of trees. It behooves the bee-keeper to have his ear to the ground, and use every influence in his power to direct this work, so that he may gain to the utmost by this increase of roadside trees. There is no more beautiful trees for roadside planting than the American linden. There are no trees more valuable for other purpose than beauty. There is certainly no trees, or even plant, that secretes more or better nectar. Every bee-keeper should see to it that in the great work of tree-planting the grand old basswood is not neglected.

BLUE-GUM (EUCALYPTUS) FLOWERS.

Hardly second to the linden in beauty or value, as affording economic products, or as a honey-producer, is the tulip, often called whitewood, and in the South incorrectly called the poplar. The bee-keeper will certainly use his influence that the tulip may have a fair consideration, as our country is being beautified by these gems of the landscape. The maples—both the sugar maple and the soft maple—take rank among the very first of our trees for beauty. The wood of these trees is also of great value in the market. While the maple blossoms a little too early to give it chief value as a honey-producer, yet it does furnish no little honey, and is no small importance in stimulating the bees to greater industry in the early spring months. For variety's sake, the bee-keeper may well urge that the maples share with the incomparable linden, the magnificent tulip, a place in city street and along country roadside.

California is as much interested in this matter of tree-planting as is any State in the Union. Indeed, I think it is more so. Water is the great desideratum in California. Too scant and too infrequent rains are a chief source of anxiety among the residents of this delightful region. Here, trees should not only be planted along the roadside and city streets, but if our people are wise, great blocks of trees will be set out on areas not otherwise occupied; and certainly more and more attention will be given to the reforesting, of our mountains, where, through inexcusable carelessness, great areas of timber have been burned to the ground. I fully believe that could our people be made to realize the importance of this matter of a greatly increased forest area in our State, we should have a general movement all along the line towards wise and extensive planting of trees.

Among the trees most desirable in California, stands pre-eminent the various species of eucalyptus. There are said to be 150 species of this genus of tree. They come from Australia, a region very similar to California. In such arid regions trees must become deep-rooted to live at all, and because of this deep rooting they will of necessity grow very rapidly, and will be fortified against the drouth that is sure to come with each year. For safety's sake, then, no tree should take precedence in such regions as California, Arizona and Nevada, of these fine, rapid-growing eucalypts. I am happy to say that our people are realizing the truth of this statement, as is shown by the rapid increase in the planting of these trees. The trees are not only attractive in form, foliage and blossom, but they are, I think, without exception, valuable for honey.

There is an interesting fact about the blossoming of these trees. Of course, in their native Australia, they blossom in the spring, which is our autumn. As they are transplanted to our State, on the opposite side of the equator, they are much perplexed. It is a struggle which shall most influence—their old habit and heredity, or their new environment. Thus, their time of bloom is very varied, and the time of bloom will change with the years. At present we can find eucalyptus in bloom during several months of the year. It is wise, then, in selecting eucalypts for tree-planting to plant a variety, that we may extend the time of bloom as much as may be. It is also wise, at the same time, to secure such trees as are valuable for timber, posts, piles, etc.; such trees as grow rapidly and will stand greatest extremes of heat and cold, and also trees that are desirable for beauty. I will proceed to give a few trees that are to be heartily recommended :

Eucalyptus citriodora is a tree that is specially commended as a honey-tree. It is a profuse bloomer, and very attractive to the bees. The leaves are very fragrant. It is very graceful, and thus is to be recommended for its beauty. It has the one objection of being rather impatient of frost. It kills down here at Claremont when young, but when well started seems hardy. The wood is like hickory, and thus will always have a value in the market.

E. rostrata is the well-known red-gum. It is graceful, grows rapidly, and makes a fine roadside tree. It is said to be the best money-getter in Australia of any of the eucalypts. It attains a height of a hundred feet. It grows well under quite a variety of climate, enduring a climate of from 15 degrees F. to 115 degrees F. The timber is valuable for many purposes, being hard and strong. It is used in our States extensively for fuel and posts. It ranks high as a honey-producer both in America and Australia. I doubt if any tree is more desirable for roadside planting in California and Arizona.

E. rudis is a favorite in the Fresno region. It also will stand a wide range of climate. The timber of this tree is also first-class, and it stands among the best for honey.

E. coryocalyx is the well-known sugar-gum. This reaches one hundred feet, and in Australia is said to attain a diameter of six feet. The bark is smooth and a buffy white, though the twigs are quite red. It stands our California temperature well, and, like the other trees mentioned above, resists the drouth to a surprising degree. It is more valuable for many purposes than is the common blue-gum, as the timber is very durable, and lasts a long time when set for posts. It blooms profusely, and is excellent as a honey-tree.

E. tereticornis is very similar to the rostrata, and is often known as redwood. I hardly know which is the more desirable for planting, and can cheerfully recommend both.

E. sideroxylon is very attractive to me. It has the grace of the American elm, while the narrow leaves make it especially beautiful. It is called, in Australia, the "red iron-bark." It stands our Claremont climate well. Its colored blossoms make it peculiarly attractive, and for this alone I should plant this tree, as also the still more beautiful and showy E. ficifolia, which has very showy red blossoms. The timber, while not as valuable, perhaps, as that of some others, is also much used for posts and in the arts—anywhere where strength and durability is required.

The other eucalypts that are specially valuable for honey are: E. calophylla, E. hemiphloia, E. leucoxylon, E. longifolia, E. melliodora, E. pilularis, and E. polyanthemos. All of these are worthy a trial in many parts of the warmer regions of California. I have often been asked by the bee-keepers of California to give a list of the eucalypts desirable for roadside planting, and for more extensive planting, with honey especially in view. I believe the foregoing may be of service, and I am sure can be relied upon.

Los Angeles Co., Calif.

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

GETTING BEES OUT OF SUPERS AND OFF COMBS.

McIntyre seems to be a mine of wisdom on several points of interest besides the cold knife. A dash of Cyprian blood makes 'em a trifle hot, but it does 'em good, and he grins and bears it. Disinclined to so much waiting as bee-escapes require; so he goes at 'em in the older orthodox ways—smoker and wet manila brush. (At my yard I would sooner completely take the combs with brush and smoker than put the escape in place—say nothing about the waiting.) If his brush was not wet, I suppose his "Cyps" would be hanging on one to each fiber. Giving each colony its own combs back, too much fuss. Same here. Late in the season I think an important gain in giving alien combs. They consider them plunder, and go at them sharper to clean them up. But that makes too much rumpus in the yard—and I get some fussing in another way—hold the supers empty till eventide, and then put the combs in. As to brush, I use a hen's wing, dry. Bees hang on sometimes, but not often. I'm disinclined to use two brushes on the same comb; and the wholesale "sweep-em" seems hardly adapted to get the bees out that cling a-top the bottom-bar. Possibly those who use it make it do so, after a fashion. Page 647.

BREEDING NON-SWARMERS.

And McIntyre thinks he could breed bees that would be non-swarmers—but they would be poor bees on the main question. Rather unique idea. But he's in line with the rest of us when he finds his bees fair non-swarmers one season, and terrors to swarm another season. Page 647.

HONEY SENSITIVE TO ODORS.

J. S. Harbison says honey is as sensitive to bad odors as butter, lots and lots of it half ruined by smoke. If he's right, the shallow super and get-the-bees-all-out-with-smoke folks have a severe backset. Rather seems to me that he is giving us "the truth, and more than the truth." You see an inspector *might* lay to smoke a purely floral bitter he succeeded in tasting in the honey. Page 647.

FLORAL BACTERIA—ORIGIN OF MICROBES.

J. E. Johnson says some of the higher forms of bacteria have actual flowers. Surprising! News to some of us—but not necessarily false on that account. But his question, whether any microbes originate spontaneously—well, at present I fear that must stand as a "fool-question." Present scientific feeling is, I believe, that a new bacterium *might* come to us from the planetary spaces, but not originate chemically. Interesting to see that Prof. Burrill, original discoverer of the pear-blight germ, thinks it possible that it might travel in fog. Page 648.

SULPHUR AND PARALYSIS.

Make every bee wade through sulphur to get into the hive—there's an easy and simple remedial method for you—providing sulphur will actually cure paralysis. Credit to Mrs. Artie Bowen. Page 649.

CROSS BEES GETTING HELP.

Sister Wilson, you say, "Fancy a cross bee letting up to go and get some other bee to do the stinging." Quite sure I have seen just that—and you will, if you watch out carefully enough. And when she succeeds in getting several to come, sometimes all together they will make a wild dash for reinforcements. Has happened (apparently) in case of a horse or cow tied several rods away, that this repeated rush for reinforcements has worked until half the colony went out and actually killed the poor beast. If you experiment, choose a hot day when bees are idle, somewhat cross, but not very. Put on your veil and take a hoe, and begin hoeing and thumping about say twenty feet from one side of the apiary—a little closer if you don't get a "bite" presently. Page 649.

QUEEN SCHEME FOR QUEEN-BREEDERS.

Great scheme for the queen-breeders. Have a caged virgin queen getting acquainted three days before the old queen is sold, then a second one getting acquainted while the first is getting to laying. Wonder if the latter might not feel so jealous and disturbed in mind as to develop more slowly, wasting in one direction as much time as was saved in the other. Page 652.

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

"A California Welcome."

This week the sisters will read with pleasure the bright, breezy poem, entitled, "A California Welcome," which comes as one of the echoes from the Los Angeles convention. The writer evidently knows what she is talking about, having formerly lived in California for some time, where she may have figured as one of the "Welcomers" herself.

A CALIFORNIA WELCOME.

O we love the gentle tourist,
With his pocket full of gold,
When he comes across the mountains
To escape the mighty cold,
And the blizzards, and the cyclones,
And the many Eastern ills;
And we meet him at the station—
Yes, we meet him without fail—
And we meet him, and we greet him
With—"A Ranch For Sale!"

And we shoulder his umbrella,
And his traveling-bag and "grip;"
And we give him hearty welcome—
Hope he's had a pleasant trip;
Doubtless found it rather tiresome;
Say he's looking somewhat ill;
But our glorious California
Soon will cure him, without fail.
Then we call his kind attention
To—"A Ranch For Sale!"

We escort him to the street-car;
As he walks across the street,
He seems to be disgusted
With the dust upon his feet;
And the cushions of the street-car
Almost seem to make him ill;
But he soon forgets his grievance,
For before him, on a rail,
Is this California legend—
"Orange Grove For Sale!"

Then we take him to our bosoms;
Make him very welcome, too;
Call his wondering attention
To the glorious mountain view!
Of the oranges and lemons—
Tell him just to take his fill.
But he seems to look askance
At the "spider" and the "scale,"
Till we hasten to inform him
That—"This Grove's For Sale!"

Then we ask him just to notice
The *greenness* of the trees.
(They are doubtless *blue*, back East!)
But we never mention "freeze;"
And of earthquakes, heat, and "northers,"
Our tongues are very still.
But the sun is beating down,
And the sea-breeze makes him quail,
Till he scarcely seems to notice
That—"This Grove's For Sale!"

And we take him to the mountains,
And we take him to the sea;
And we bid him use the water
Just as if the "stuff" were free.
But he doesn't like its fragrance,
Nor approve its lack of chill;
And he seems to feel quite "retched,"
And his countenance is pale;
And we scarcely dare to tell him
That—"This Ranch's For Sale!"

But he seems to be distracted,
(He's been bitten by a flea!)
But we hasten his attention
To the azure sky and sea.
But a whopping old tarantula
Has given him quite a chill;
And a rattler, close at hand,
Is making music with its tail;
Till we quite forget to tell him
That—"This Grove's For Sale!"

And we follow him about,
And "boom" the country, day and night;
And we think it rather shabby
If that "sucker" doesn't "bite;"
If that "tenderfoot" doesn't swallow
Our small, sugar-coated pill.
Then we chase him to the station;
As he rides off, on the rail,
We yell, to beat the engine—
"I've a Ranch For Sale!"

Waushara Co., Wis. MARY B. HALL.

About Queens—Breed from the Best.

We have been blessed with the largest crop of comb honey this year that we have ever had, and this with a very much smaller number of colonies than we usually have, as we began the season with only 124 colonies. Much of this success was due to the phenomenal season, but I believe also that much was due to the superior quality of our queens.

For a number of years we have selected our *best queen* from which to rear queens. Not the best tested queen, as that term is generally understood, for that means only how many golden bands her bees have; but our best queen, as shown by the record of her bees as honey-gatherers. That one fact, pure and simple, decides her worth without regard to her color, although we are *very glad* when our best queen gives us beautiful, golden-banded bees.

I think I must modify the statement that honey-gathering alone decides her worth, for there is one other element that enters largely into the matter when making the decision, and that is swarming. A good many points will be given in favor of the queen that has made no attempt to swarm, but be it said to the credit of the good honey-gatherers, that almost without exception they are the ones that have made very little or no attempt to swarm. Perhaps it might be put the other way—the colonies that make little or no attempt to swarm are the ones that store the most.

If, during all the years of our bee-keeping, we had made the effort to improve our bees as honey-gatherers, that we have made for the past few years, I don't know where we might not be now, if the bees had continued to improve at the same ratio. It pays, and pays well, to look sharp as to the record of each queen.

When any colony fails to do good work, the head of their queen is in danger.

Our best queen, this year, gave us 300 finished sections, and quite a number of others came very close to that number. If nothing happens to that queen you may be pretty sure she will be used to rear queens from next year.

Don't Have the Addresses.

To several who have requested addresses of correspondents, I may say that I have made no reply, because I do not have addresses.

Amerikanische Bienenzucht, by Hans Buschbauer, is a bee-keeper's handbook of 138 pages, which is just what our German friends will want. It is fully illustrated, and neatly bound in cloth. Price, postpaid, $1.00; or with the American Bee Journal one year—both for $1.75. Address all orders to this office.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Starting an Apiary—Buckwheat for Bees—Shade, Etc.

1. I have just rented a 4-acre home in the suburbs of a city, and intend starting an apiary with the red clover Italian stock only. Now, as bees are too high-priced here, it is my plan to obtain frames of nuclei. Is this a good plan for a hasty increase, putting one frame and queen in a hive? How soon in March would you order stock? and would about 5 frames be enough to start with?

2. I will sow about 2 acres in buckwheat. How much seed shall I sow to the acre broadcast, and at what time, at the very earliest, in the spring?

3. On the above plan, would each colony produce any queens? If so, what time next summer would you go through them to find queens? and how many queens would I expect to find to a hive? I expect to clip all queens' wings, as ground-pests are not bad here, and I will aim to have all hives down low.

4. I have no shade on my ground, excepting close to the public highway, and it being rented property I can not put out grape-vines, but will try a quick-growth vine of some kind at each hive, on an arbor. What seed would you sow that is of quick-growth and makes a good shade?

5. About how many bees would you allow to a one-story 8 or 10 frame hive, calculating measurement by the pint or quart?

6. Is it necessary to put supers on before brood-chamber is filled up?

7. About how far will the Italians go to work on a good clover-field in honey-flow time?

8. If a colony brings on one or more queens, would you retain them and destroy the old one? and what is the best *way*, and *feed*, to care for and keep extra queens in reserve for emergency? I will want to renew about every 2 years?

I love to work among the bees better than running my pet engine. I use Prof. Cook's Manual, and I am a subscriber to the American Bee Journal, and all information about bees is well digested; and if I live long enough I expect to be a member of the National Bee-Keepers' Association.

MISSOURI.

ANSWERS.—1. If I understand you rightly, your plan is to get 5 frames of brood and bees and put these in 5 hives, one frame in each hive. A 1-frame nucleus in June or July would be a pretty weak affair to set up housekeeping, and in March would be likely to give up the ghost. Your safer plan will be to let your five frames stay in one hive as one colony till the colony becomes very strong before dividing; perhaps making your first nucleus in May. But, first of all, you should study thoroughly your bee-book, so as to have a good knowledge of the general principles of bee-keeping, and you will thereby be saved from many a serious mistake.

2. Sow about three pecks to the acre. Buckwheat is not a thing for spring planting, the time of sowing for best results being from the middle of June to the first of July. Still, if there is nothing else the bees can work on, I suppose it might be sown toward the last of April.

3. If you follow the plan outlined, you are not likely to find any extra queens in the hives any time through the season. Such queens are reared when a colony becomes strong enough to cast a swarm, and about eight days after the first swarm the young queen will begin to emerge.

4. Wild cucumber, morning-glory, nasturtium, and hops would answer. The women of your neighborhood can probably tell you of some others.

5. If they mean the amount of bees in a fair colony, 5 or 6 quarts.

6. No, nor is it advisable.

7. If they can find nothing nearer, they might go five or six miles, but would hardly work profitably more than a third of that distance.

8. I don't understand your question, but I don't believe a case will often occur in which it is advisable to kill the old queen. Reserve queens are kept in nuclei, one in each nucleus.

Basswood for Making Hives.

Does basswood make good hives, or would it get too damp in the winter?

MISSOURI.

ANSWER.—My, no! Basswood shrinks and swells, and warps and twists to such an extent that it's not fit for a hive, or anything about a hive.

Uniting Colonies and Saving Queens.

1. If I unite and double up my colonies in the spring, reducing my 35 colonies to 17 or 18, or one-half, when would I better do it? And how will I proceed? Or, can you tell me of some better plan to keep my number down around 25?

2. Can I save queens from the united colonies, and how? Would it be better to let them rear a young queen when they swarm again? You will see by my questions that I don't know it all yet.

NEBRASKA.

ANSWERS.—1. Unite in the spring any time after bees get to flying. It will be as well not to unite directly two colonies of equal strength. The weakest colonies may be united with those considerably stronger, and you will probably find no fighting if you merely set in the frames of brood, bees and all. Then to unite those nearly equal in strength, first unite half the colony, and four or five days later add the rest. It will be well to have the colonies sitting close together that are to be united. Then when you have finished uniting take away the empty hive, and the field-bees will all remain with the united colony.

2. The only way you can keep the queens will be in nuclei, and perhaps it will be just as well to depend on new queens at swarming.

White Pine for Hives.

Is white pine good material of which to make hives? Will the bees accept it as a home equal to poplar?

INDIANA.

ANSWER.—White pine is probably the sole material used by manufacturers of bee-supplies, unless it be in California, for making hives, and bees accept it without protest.

Sowing White Clover Seed—Bee-Eggs Hatching.

1. When should white clover seed be sown?

2. What is the longest time an egg was ever known to remain in the hive without being hatched?

ANSWERS.—1. It may be sown at different times, perhaps no better time than when vegetation first starts in the spring.

2. I don't know. If I remember rightly, Dzierzon tells of eggs being held about two weeks and than hatching.

Feeding Bees for Winter.

I have 2 colonies of bees that came here last spring. From the largest we got about 40 pounds of honey; the other hive we did not open. We put them down into the cellar and covered them with a blanket. I think we destroyed one colony, as they did not gather any honey all through September, and there was plenty of clover around. There are only a few bees in the hive. Will I have to feed them? If so, what is the best to give them? ILLINOIS.

ANSWER.—Bees do not generally gather from clover in September, even though blossoms are seen. The small number of bees in a colony left to itself through the summer, makes it doubtful whether they have a queen. If queenless, it is only a waste to feed them. The best thing for feed is combs of sealed honey, and the next best for this time of year, candy made according to the instructions given in your bee-book.

Wintering Bees in a House—Late Drones.

1. I am thinking how to winter my bees, and have a mind to put them in a small, dark, warm house, shut each hive with screen, and not let them out until in the spring. Will this do?

2. Do bees need more air in winter than in summer.

3. Is oilcloth good to put on top of the frames, or is it too cold?

4. Would paper folded and laid on top of the frames be warmer, and absorb the dampness better than oilcloth?

5. Two of my hives have some drones yet. Why is it?

NEBRASKA.

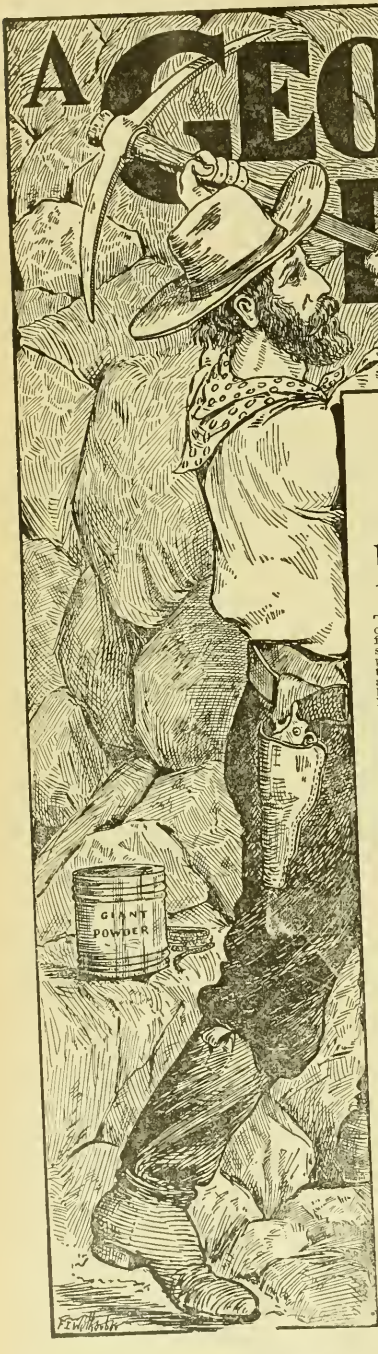
ANSWERS.—1. Not very well, I'm afraid. By no means should they be fastened in the hive with wire-screen. It will only make them worry the more to get out. Unless you can keep the temperature pretty evenly at about 45 degrees, any kind of a house above ground will not be likely to work very well.

2. No, not so much; but they do need some, and it should be pure as possible.

3. It will do if covered over warmly with something else.

4. Paper is warmer than oilcloth alone. But if you use paper, you must have burlap or some other cloth under it to keep the bees from tearing it to pieces.

5. I'm afraid they're queenless; yet it sometimes happens that drones are suffered late where there is a good queen.



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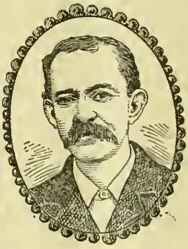

I feel it my duty to tell you, and also the general public, what Vitæ-Ore has accomplished for me. For the last twenty years I have taken all kinds of medicine, but at no time received more than a slight temporary relief. Three years ago I took treatment from one of the best doctors at Leopold, Indiana. He examined me, and gave as his opinion that I had Catarrh, Bronchitis, Liver and Kidney Trouble. I was at that time taken with a severe pain in my back which he diagnosed as Rheumatic Lumbago. I doctored with him continually and persistently for 5 months' time, getting relief for only a very short time, and gave up hope of ever getting well again.

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FROM MANY FIELDS

Doubling Up Colonies—Entrance-Closer.

On page 712, Mr. Bingham says he doubled up his colonies, putting 150 into 75. Why not have him and other veterans tell the best way to do it?

By the way, why don't some experts get up an entrance-closer that will save lifting a heavy hive to turn over the bottom-boards? I use them, and like them very much, but I would like to buy them when I buy my hives.

F. P. Briggs.

Middlesex Co., Mass., Nov. 16.

[Mr. Bingham is hereby requested to tell us how he doubles up colonies.

A good entrance-closer was illustrated and described about three months ago in these columns.—Editor.]

A Big Catnip Experiment.

I promised, some time ago, to furnish an article for publication relating my experience the past season with catnip, so here goes:

"Ten acres of wild catnip; ten thousand pounds of choice comb honey; $3,000 worth of seed in one short season; and how I did it."

It was about sundown, a little later or a little sooner, may be, I don't know (borrowing the language of Josiah Allen's wife), a real thought came to me that a reality of the above paragraph, although somewhat extravagant, would not be impossible. So one bright October morning I ventured out with team and wagon, with a new triple box and a hand-scythe. I gathered catnip enough in one day to thrash out 40 pounds of choice seed.

March 31, 1902, those 40 pounds of catnip seed were scattered over ten acres of good ground, where a good crop of corn had been raised the previous year. The cornstalks were still standing tall and thick, so I cut them down with a disk harrow to level the top surface, leaning the teeth well back so as to scatter the stalks as much as possible, forming a mulch for this much-treasured seed.

Abundance of rain soon brought forth a nice crop of catnip plants, but as soon as we had a dry spell, of say two weeks, those catnip plants withered away like the morning dew before the hot sun. One-half acre of the above-mentioned lot produced a crop of potatoes last year. The ground was rich and clean. Here the catnip did not come up until the ground was shaded by growing weeds. When the weeds were from 6 to 8 inches high

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the catnip presented a most admirable, luxuriant growth. Yes, here among the weeds a fortune was smiling in my face!

About June 10, I cut the weeds with a mower. leaving them lay where they dropped to mulch the ground; but in less than 8 days nearly every catnip plant had withered away, and withered away to stay dead for good, as the whole 10 acres has only a few isolated plants here and there.

In the latter part of October, 1902, I sowed a strip of land 2 rods wide by 10 rods long, with some of the same catnip seed. This ground had no protection, but had a good, uniform stand that measured more than 2 feet high July 1, 1903, when it began to blossom, and has blossomed continuously until quite recently. Bees will not only work on it from early morn until dark, but they will work on it immediately after a heavy, continued rain, while the water is yet dripping from the blossoms. It is perhaps the greatest nectar-yielding plant in this State.

Such is the story, in short, of perhaps the most extravagant experiment of its kind up to the present time; and while it was a failure, and the hope of ambition not realized, lessons of value may be deducted as follows:

First, that catnip will grow in the open.

Second, that the ground must be rich.

Third, that it must be sowed in the fall.

Fourth, 2½ pounds of seed per acre is a great plenty.

I will conclude by saying that I did not gather any catnip seed this fall. Would you like to know why? J. W. JOHNSON.

Stephenson Co., Ill., Nov. 9.

Queens Laying in Queen-Cells.

On page 663, there is an article on queen-rearing, etc., by A. C. F. Bartz. I wish to question his assertion in the closing paragraph, in which he says:

"But I believe if one would go to the trouble and take away the brood-combs from a colony intending to swarm, and insert several, say three or four combs with queen-cell cups, the queen would lay in them in such rapid succession that nearly all of them would hatch at the same time."

I wish to say to Mr. Bartz, or any one who intends trying this plan, I very much doubt his getting a single queen-cell started for some time; not until the queen has filled all the vacant cells in the combs, and then the queen will not lay in the cell-cups.

It is not an uncommon thing to see a queen lay in worker and drone cells, but I do not hesitate to say that a queen will not lay in a queen-cell. If Mr. Bartz, or any other person, ever saw one do so, let him hold up his hand.

I think if Dr. Miller was asked if a queen would lay in a queen-cell, he would say, "I don't know;" and he is one of our closest observers of the bee's habits.

I know that worker-bees can, and do, move eggs from one comb to another, and I believe they always put the eggs in the queen-cells. DELOS WOOD.

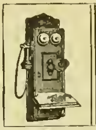
Santa Barbara Co., Calif., Nov. 5.

Bee-Keeping in Alabama.

I moved to this State last spring, with the intention of turning my attention to fruit-growing, but the dryness of the summer and fall was much against young trees and plants, owing to its being a mountainous country with sandy soil. On finding much of the land poor and greatly impoverished by raising cotton, and washing, I said, "Clover is what this land needs;" but with one accord they urged me not to waste any time and money by sowing it, as it was too dry. This did not convince me, so I ordered red, crimson, sweet, alsike and white clovers, and sowed a little of each last spring, and, true enough, what came up mostly died before the fall rains came. That was the last of October, but I found a few roots of white and a few of red, in a place where a horse had been fed (they tell me on imported hay), that lived and did well, and made seed. I concluded that spring was not the time to sow it, so I am sowing it now.

Last spring I found a colony of bees that were queenless, so I sent for an Italian queen; she did her part well, but the fall was dry, and so far as I could see nothing to make honey of. My sweet clover never came up, and the only thing in the clover line is what is called here "Japan clover," and I am very doubtful if it is a clover at all; at any rate, it yields no nectar. In September I found the bees would starve if I did not feed, so I fed sugar out of jelly-glass feeders, with perforated tops, which is the handiest feeder I have ever tried. Fill the glass full, then invert, and the bees will get every drop, and not a dead bee. It is so easy to handle, too. E. B. ELLIS.

Cullman Co., Ala., Nov. 11.



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Building Outside the Hive—Separators—Growing Alsike.

The Editor asks for "experiences" of bee-keepers. As I had experiences the past season, differing in some respects from any I have had before in more than 20 years of bee-keeping, I will try to relate some of them, though whether other bee-keepers will be benefited thereby is a question. My wish is that I may gain some knowledge, if some one will tell where I made mistakes, if mistakes were made by myself, or was it the bees?

In the first place, my colonies were nearly all very strong, probably caused by good feeding in the spring, before the honey-flow began. In nearly every case the space between the brood-frames and the bottom super was filled with honey before the super was half full or ready to have another put under it, and burr-combs and honey were crowded into every space available—under the honey-boards, and

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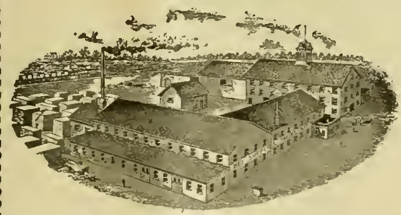

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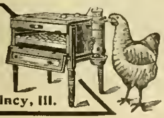

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in the covers if there was a hole big enough for the bees to get past the honey-board. They even built comb outside under the porch, on a number of hives, and all the time I thought I was giving them plenty of super-room. Wonder if I did.

Another thing bothered me a good deal: For the first time in my experience I used separators between the sections, the "plain, sawed" separators, and to make them as nearly like the "fences" as I could, I punched 4 holes in each piece, opposite the middle of the section with a 16-guage wad-cutter, for a passage-way. Now as to the results:

I found about 5 percent of the sections fastened to the separators more or less firmly, and in several cases the combs were joined together right through the holes in the separators. Of course this made quite a muss when cut loose, and I had to sell these damaged sections at quite a sacrifice in price. The balance were in fine shape, and averaged about 14 ounces to the section; but this was no advantage to me, as I always sell by the pound. Now I am wondering if it pays to use separators, any way, and if I made a mistake in punching the holes in them.

When I came to remove the sections from the supers I was not a little surprised to find the bees had gnawed a large part of the separators, both and top bottom, some of them a good half inch in depth the whole four inches inside the section. I was never bitten by the front end of a bee, but don't tell me a bee has no teeth when they can gnaw a basswood board like that. It appeared as though the busy little bodies tried to remove those objectionable obstructions entirely out of their way.

I want to digress a little here and take up more space. In "Forty Years Among the Bees," Dr. Miller complains of poor success with alsike clover. Allow me to suggest that he try sowing it without a nurse-crop. Select the lowest ground he has—the richer it is the better—plow and prepare a good seed-bed in the fall, then in the spring (late March or early in April) scatter the seed on a good coating of snow, if possible, when it will require no other cultivation to make it germinate. In the absence of snow, cultivate very lightly after sowing the seed. In the summer, if the weeds get too high, mow with the sickle-bar raised above the clover-plants, though if some are cut off it will do no harm. If the season should prove a very dry one, I would leave the weeds for a shade to the young clover, and protection in the winter. In the 12 years continuous experience with alsike clover, I have never known it to fail in producing nectar, while some years it has been our only source of a honey crop.

A. F. FOOTE.

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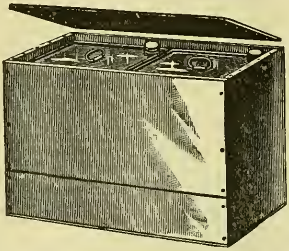

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MASSACHUSETTS AGRICULTURAL COLLEGE

AMERICAN BEE JOURNAL

Published Weekly by GEORGE W. YORK & CO., 144 & 146 E. Erie Street.

43d Year. CHICAGO, ILL., DEC. 3, 1903. No. 49.

WEEKLY

FRED W. MUTH.
(See page 773.)

Some Expert Opinion

"In the multitude of counsellors there is safety."—BIBLE.

Best Dimensions of Brood-Frame.

If for some reason you were to start in anew to keep bees, and were obliged to get au entirely new outfit—

Ques. 1.—What would be the dimensions of the brood-frame? Why?

N. E. FRANCE (Wis.)—Standard Langstroth. Only size salable on the maarket.

EUGENE SECOR (Iowa)—Langstroth size. Because, on the whole, I have never seen a better one.

R. L. TAYLOR (Mich.)—18 inches by 5⅜ inches. Because it gives me a divisible brood-chamber, and an elastic one to some extent.

MRS. L. HARRISON (Ills.)—The Langstroth frame. It is the only one I've had experience with, and the inventor made no mistakes.

DR. C. C. MILLER (Ills.)—17⅝x9⅛. For two reasons: It is most nearly standard, and it is perhaps the best size when working for comb honey.

C. P. DADANT (Ills.)—Langstroth top-bar with 2 inches more depth. Because the hive would be larger, the frame would be better for wintering, and general results more satisfactory.

JAS. A. STONE (Ills.)—Regular Langstroth size. Most convenient to handle, and for the reason that two supers, or a double story, makes just the size needed for the frame for extracting.

E. WHITCOMB (Nebr.)—8-frame. This size is large enough to furnish the colony an ample brood-nest, and which should be set apart entirely for that purpose. We never go into the brood-chamber for honey.

WM. ROHRIG (Ariz.)—I would use the standard Langstroth frame, 17⅝x9⅛. Just as much honey can be produced by its use as by any other; it is convenient to handle, and more easily obtained when wanted.

C. DAVENPORT (Minn.)—For single-brood-story hives I believe what I now have. The Langstroth size suits me as well as anything I know of. For double-brood-chamber hives I prefer a frame the same length, and about 5 inches deep.

DR. J. P. H. BROWN (Ga.)—I would use a frame 17⅜x9⅛; top-bar 19 inches. Because this size of frame is the best suited to accommodate my section-cases. Were I living in a higher latitude, I might use a deeper frame so as to economize heat.

C. H. DIBBERN (Ills.)—Well, I would use about such a frame as I have used for the past 20 years—7x20 inches, close ends. Such a frame needs no wiring, if foundation is rightly used; and it is a very easy matter to remove and handle the frames.

E. E. HASTY (Ohio)—The common Langstroth, 17⅝x9⅛. Good frame on its own merits. Bees on it will sell for more. Also, supplies for it can be more conveniently had. I used to argue against the Langstroth, and it has kind 'o floored me in the course of years of use.

G. M. DOOLITTLE (N. Y.)—Perhaps the regular Langstroth frame is as good as any, and has the advantage of being more largely in use than any other, so that in any exchange made with others, or in getting new frames from the manufacturers, little if any delay is experienced.

J. M. HAMBAUGH (Calif.)—Locality has a great deal to do with this question. In this State I do not see how the regular Langstroth size can be bettered. But where the wintering problem is a factor in consideration, I think I would adopt a larger frame, and one more square in dimensions.

J. A. GREEN (Colo.)—I am very well satisfied with the frame which I am using, which is 5⅝x17⅝, used in a double brood-chamber; but if I were starting anew, I would make it only 5⅛ deep, in order that the brood-chamber and a super that would take a section 5 inches deep would be exactly alike.

P. H. ELWOOD (N. Y.)—Our frame is about 10x16 inches, inside. For section honey a somewhat shallower frame might be better, but for winter a still deeper frame would be better. Also, the shallow frames are not so good for spring building up. Any change would be toward a deeper and shorter frame.

S. T. PETTIT (Ont.)—I am not quite sure, but to be in line with the majority, with the advantages that are carried with it, I would be drawn to the Langstroth. But I like better a frame 9x16 inches, 12 to the hive, because a wide, short hive gives better ventilation, and a short frame is more rigid than a long one; and more, such a hive gives *room for dividers, and 36 sections to each super.*

PROF. A. J. COOK (Calif.)—Regular Langstroth. I give the reasons in my "Bee-Keeper's Guide." It is good, if not the best. Most bee-keepers use it. It is desirable to have hives that are like those of most bee-keepers. It is easier to sell bees. Every bee-keeper should produce both kinds of honey, so as to meet all demands. The Langstroth is as good a hive as any for this general work, in my opinion.

L. STACHELHAUSEN (Tex.)—I prefer a frame as long as the Langstroth, and 5¾ inches high. Two, and sometimes three, stories are used for the brood-chamber. To explain why, I would need the space in the American Bee Journal for one or two articles. The main reason is, that shallow frames save nearly one-half of the time necessary for extracting; and that I want all frames in the apiary alike and interchangeable.

O. O. POPPLETON (Fla.)—12 inches deep by 14 long, inside measure. I produce extracted honey only, and use the single-story system, or what is known as the "Long Ideal hive." All colonies should be in as compact a form as possible, and to use shallower frames in this form of hive, would spread them out too much for best results. The size 12x14 gives about the right medium between too shallow and too large a frame, for this method of management.

REV. M. MAHIN (Ind.)—The frame I use is 12 inches long and 10¼ inches deep, and I am very well satisfied with it. If I were going to make any change in it, I would add two inches to its length, and ½ inch to its depth. I would then use 10 frames to the hive. This would make the brood chamber nearly square, and give ample room for brood-rearing and winter stores. The frames would be very easily manipulated. There is advantage in having the brood-chamber compact.

G. W. DEMAREE (Ky.)—In deciding a question of this kind no doubt but the important matters of locality, climate, etc., should be taken into consideration. In my locality, I would not change the original Langstroth dimensions of brood-frame. Why? Because I have, in the past 27 years, experimented with a great many sizes of frames, and have never found any size or shape of frame that is so well adapted to proper size and form of the brood department of the hive.

E. S. LOVESY (Utah)—I believe with the long and varied experience that I have had with many styles and sizes of hives, if I were starting anew I would use a frame about 13 inches deep and 13½ inches long, and the top-bar 15 inches long. Because it is the best shape and size frame for wintering. And, while you don't ask for dimensions of hive, if I lived in a cold climate I would make a double-walled hive with loose bottom-board—a hive that is simple, cheap, and easy to make; but I have not space here to describe it.

MRS. J. M. NULL (Mo.)—Standard Langstroth size. I have most success with this size, and for the sake of uniformity of fixtures; more of this size being used than any other one size, and possibly more than all others put together throughout my territory. A well-known bee-keeper is quite frequently offered bargains in small lots of bees and fixtures, which, if of uniform size, it is good policy to accept, not only because of its being "money in the pocket," but because these little "side-shows" (in more than one sense) prove a "thorn in the flesh" of the specialist.

ADRIAN GETAZ (Tenn.)—As to length, such as will admit the length of the hive to be the same as the supers. These (if using 4¼x4¼ sections) should be 17⅛ inches long inside, giving room for four rows of sections and ⅛ inch play for facility of handling. As to depth, such as will give a brood-nest of full size, using only 9 frames. With more than 9 frames the supers are too large, as they must cover the brood-nest. As to what constitutes a full-size brood-nest, see "Langstroth Revised." It is the equivalent of something more than 12 ordinary Langstroth frames. The tall frames are much better for wintering outdoors. The honey being above the bees it can always be reached. The cold air coming in at the entrance does not strike the bees as hard as it will when the cluster is barely above the entrance.

R. C. AIKIN (Colo.)—Starting anew, I would have my frame 5 inches deep and 16 long, outside measure, used in divisible-brood-chamber hive. The reasons are that I can handle hives most of the time instead of frames; can contract or enlarge at will without changing width or length, and in a way that is, *by all odds, the least objectionable*, and least annoying, and out of harmony with the bee-nature; can get the largest amount of brood with a minimum of swarming-fever; can tell more quickly if swarming preparations have begun; can have the brood-nest in better shape for winter, and better wintering; can get stronger colonies in spring; all together, I can accomplish much more with the same labor and time. I will be laughed at, but I am probably nearer on the road to control of swarming than those who use the old-style frame and hive—the Langstroth hive.

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ESTABLISHT IN 1861

AMERICAN BEE JOURNAL

THE OLDEST BEE-PAPER IN AMERICA

43d YEAR. CHICAGO, ILL., DEC. 3, 1903. No. 49.

Editorial Comments

Some Expert Opinion.

This is the heading of a new department in the American Bee Journal, or rather an old department which is revived this week. It ran before for 10 or 15 years, and was very popular, but for several good reasons it was allowed to drop out a few years ago. We now bring it forward again with practically the same corps of experts who for years so kindly and acceptably answered the questions that we sent to them.

It is not intended that this department shall in any way overlap or interfere with "Dr. Miller's Answers," but that certain questions, upon which there may be a great diversity of opinion, are to be referred to the "multitude of counsellors."

We feel very certain that it will be read with much interest and profit by all, not excepting those who contribute their answers to the questions propounded from time to time.

Of course, we reserve the right to decide as to what particular questions shall be referred to this honorable board of experts. Dr. Miller's prestige and patronage in this line is not to be lessened in any degree by this resurrected department.

"In this Locality."

This is a phrase that has been more or less a subject for merriment, yet when you are right down to it there is no disputing that there is a lot in locality. Mr. A. says a certain thing is so and so; B. says it is just the opposite; and each wonders how the other can be so lacking in good judgment. For example, one man says he wants nothing better than closed-end frames; another says that rapidity of manipulation with frames having ends half-closed, to say nothing of closed-ends, is a thing impossible. Each man is right for his own locality, for the abundance of bee-glue in the one locality and its absence in the other makes all the difference in the world.

The thing needed is charity, and a view broad enough that when any one disagrees with us, to think that if we could change places with him we might also change views.

Apicultural Education.

In this country the young man or the young woman who starts out to get an education in bee-keeping must, in most cases, be self-taught, with no aid beyond what he can get from bee-books and bee-papers. It is true, that in a few agricultural schools bee-keeping is taught, and some fleeting instruction given in a few farmers' institutes, but that is about all. Other countries do better. In Europe a start has been made in the establishment of regular apicultural schools, and in England a fairly successful attempt has been made to have instruction given everywhere.

The British Bee-Keepers' Association was founded in 1874, its avowed object being "to teach by means of duly qualified lecturers and experts the modern methods of bee-keeping. The Council, composesd of practical bee-keepers, appoints examiners and issues certificates of proficiency in bee-keeping." First-class, second-class, and third-class certificates are given. At a recent conference of the Council of the Association with representatives of County Associations, the chairman, Mr. Thos. Wm. Cowan, "endorsed Mr. Reid's statement to the effect that English methods were equal to any on the Continent, although probably no Goverment in the world did so little for the industry as our own. Germany had about 30 associations, nearly all of which published their own papers, the cost being borne by the Government, and this was sent gratuitously to all members. In Normal Schools bee-keeping was one of the branches of instruction which the future schoolmaster was required to teach.

"Mr. Scattergood was quite right in saying it was the children they wanted to secure, or, at least, create in them an intelligent appreciation of apiculture. On the Continent it was taught in schools, so that those who wished could continue the study of bee-keeping later on, while all gained more or less knowledge of the pursuit."

Our good friend, Mr. Cowan, was hardly correct when he said that probably no other Government did so little for bee-keeping; at least it will probably be difficult to find in this country as many counties as in England, which give an annual grant of $150 to $250 for the furtherance of apicultural interests. But it is comforting to know that in this land of ours the outlook is growing brighter.

Making Dark Honey Light.

In the British Bee Journal it is reported that dark honey subjected for about three hours to ozone from an electrical machine became light in color, and that the expense per hundredweight would be trifling. Important if the cost be not too much, and yet—and yet. Would there be any benefit in the long run in having buckwheat honey look the same as clover, supposing all the time that there was no change in flavor? It would take away one of the easiest means of distinguishing one honey from the other. And would it not make consumers constantly suspicious that all light honey might be buckwheat or honey-dew?

Do Bees Injure Sound Fruit?

Tests sufficiently numerous have been made so that it does not seem necessary that any fresh test should be made. Yet fresh accusations persistently made leave fresh tests by no means without value, especially if those tests be made as much in the interest of the fruit-men as the bee-men. Our Canadian friends have been making some experiments that might be cousidered exhaustive at the Ottawa Experimental Farm, and these are reported in the Canadian Bee Journal. First, strawberries were tried, then raspberries, neither of which were injured by the bees. The fruit was placed inside the bee-hive, also in other places easy of access to the bees. Inside the hives the fruit was exposed in three different conditions:

(1) Whole fruit without any treatment.

(2) Whole fruit that had been dipped in honey in one-half of the super.

(3) Whole sound specimens in the other half of the super.

A second test of the same kind was made with peaches, pears, plums, and grapes, some of the fruit being punctured.

"The bees began to work at once, both upon the dipped and punctured fruit. The former was cleaned thoroughly of honey during the first night; upon the punctured fruit the bees clustered thickly, sucking the juice through the punctures as long as they could obtain any liquid. At the end of six days all the fruit was carefully examined. The sound fruit was still uninjured in any way. The dipped fruit was in a like condition, quite sound, but every vestige of honey had disappeared. The punctured fruit was badly mutilated and worthless, beneath each puncture was a cavity, and in many instances decay had set in. The experiment was continued during the following week, the undipped sound fruit being left in the brood-chamber; the dipped fruit was given a new coating of honey and replaced in the super, and a fresh supply of punctured fruit was substituted for that which had been destroyed.

"At the end of the second week the fruit that was sound at the end of the first week that had been dipped in honey, and also in the brood-chamber as well as the punctured fruit, was considerably decayed, and where any openings appeared showed signs of being worked on, but to no very great extent.

"For the third week, fresh samples of fruit of all the above kinds were used. The results of this test was very similar to that of the first week, and being later in the season the fruit that had been put in sound, some of it had began to decay.

"After the third week the bees belonging to the two hives which had been deprived of all their honey, appeared to be very sluggish, and there were many dead bees about the hives; the weather being cool and damp was very much against those colonies. These colonies had lived for the first three weeks on the punctured fruit, and on the honey off the fruit which had been dipped; as there were at that season few plants in flower from which they could gather nectar, these bees had died of starvation, notwithstanding the proximity of the ripe, juicy fruit. This supply of food, which they were urgently in need of, was only separated from them by the thin skin of the fruit, which, however, this evidence seems to prove they could not puncture, as they did not do so."

The "Sweet Tooth" Should Have Honey.

The following has been sent in by Walter Martin, of Colorado, who says he "believes it worthy of copying, as it possesses some really good common-sense, and is told in a very brief manner:"

> The best way of curing children of the injurious candy habit is to make pure honey fresh from the hive, or properly extracted from the comb, a regular feature of their diet. Not only candy, but lumps of sugar, sweet-cakes and too much jam are bad. Pure honey is good.
>
> Honey is more easily assimilated than many "predigested" foods. It is a concentrated food, and furnishes the same elements of nutrition as starch and sugar, imparting warmth and energy.
>
> Honey is a valuable medicine, and has many uses. It is excellent in most lung and throat affections, and is often used with great benefit in place of cod-liver oil. Occasionally there is a person with whom it does not agree, but most people can learn to use it with beneficial results.
>
> Children who have natural appetites generally prefer it to butter. Honey is a laxative and sedative, and in diseases of the bladder and kidneys it is an excellent remedy.

Such items can not be given too wide a circulation. It would be a good thing if bee-keepers everywhere could get their local newspapers to publish it.

We have several times urged that the National Association should do some advertising in the daily papers, in the interest of a more general use of honey. Such items as the above would be just the thing to put into such advertisements. We believe that nothing else would so increase the demand for honey among all the people as just the kind of advertising we have mentioned. It ought to be done. And the National Association is the concern that should do it. Why not?

Box-Hives or Straw Skeps.

These are still used in large numbers in many parts of the world. In some parts of Germany they are used almost exclusively. "What an ignorant lot they must be," do you say? No, box-hives are preferred by intelligent men thoroughly versed in bee-keeping, who say that for the prevailing conditions box-hives are to be preferred. It is hard for us, in this country, to understand how that can be, but when men of bright parts, familiar with bee-literature and modern methods say it is so, we should have charity enough to say that we are not the custodians of all the bee-wisdom in the world.

A Novel Kind of Insurance.

At least different from anything in this country, is that in England, whereby a bee-keeper is insured against damage done by bees. That is, if Jones keeps bees, and his bees sting Brown's horse, the insurance association will take the place of Jones to pay all damage up to a certain limit. To insure his bees thus, it will cost Jones two cents per colony.

Miscellaneous Items

Mr. Thos. Dougherty, of Bureau Co., Ills., has been a bee-keeper for nearly 40 years. Last spring he began with 21 colonies, increased to 44, and harvested 2100 pounds of extracted honey, and 2000 pounds of comb honey.

Mr. E. Kretchmer, of the Kretchmer Mfg. Co., of Montgomery Co., Iowa, returned recently from a trip to Europe. He was absent about 14 weeks. Bee-Keepers are getting to be great travelers—at least some of them. Perhaps Mr. Kretchmer will tell the readers of the American Bee Journal something about his trip across the water.

The Illinois State Convention, which was held at Springfield Nov. 17 and 18, arranged it so that the annual dues of $1.00 would pay membership in both State and National Associations. A list of 23 names was sent to the National, with others to follow. The following were elected as officers:

President, J. Q. Smith Vice-Presidents: 1st, John S. Dowdy; 2d, J. W. Prinman; 3d, Aaron Coppin; 4th, Jas. Poindexter; 5th, S. N. Black. Secretary, Jas. A. Stone, Route 4, Springfield, Ills. Treasurer, Chas. Becker.

Mr. W. A. Pryal, writing us Nov. 21, from San Francisco Co., Calif., had this to say about the glorious rains they are having:

> DEAR MR. YORK:—For the past week we have been having rain galore in this and the northern portion of the State. I understand the storm has been doing some good in the south land; it is in the northern and north central sections that the greatest precipitation has taken place. Just think, in the county just north of this—(Marin), the great dairy or cow county—the rainfall has been as much as three inches a day. The rains have come late, which, according to long observation, means a wet winter. 'Rah for next year agriculturally—also bee-culturally. W. A. PRYAL.

Mr. James U. Harris, of Grand Junction, Colo., president-elect for 1904, of the National Bee-Keepers' Association, in referring in a private letter to the place of meeting next year, wrote us Nov. 14:

> "I should be pleased to have an expression through the bee-papers as to what the National members would think the best meeting-place for next year."

It might be a good idea for the members, when voting soon, also to say where they would prefer to have the meeting of next year. While such a vote would not be binding at all on the new executive committee, it would perhaps help them in making their decision.

As we understand it now, the following cities have been mentioned: St. Louis, San Antonio, Cincinnati and Salt Lake City. Our preference is for the cities in the order here given, though, of course, what we would choose has nothing to do with what other members prefer. We would not attempt to influence a single vote on this matter.

Bee-Exhibit in the Public School.—Mr. Thos. Chantry, of South Dakota, wrote us as follows, Nov. 19:

> DEAR MR. YORK:—I surely get lots of comfort and good out of the American Bee Journal. I send some clippings from papers here which explain themselves. By a chain of circumstances I exhibited an observatory hive with no thought of anything more than my interest in pleasing and benefiting the children. There are many grown-up people in Dakota who have never seen a honey-bee. I also thought it might help to show how impossible it is to manufacture comb honey, etc. And the awakened interest in the homes all over the city caused indirectly a much larger use of honey, and made many friends. It seems now to show promise of a lasting advertisement.
>
> THOS. CHANTRY.

The clippings referred to by Mr. Chantry, consist of compositions by pupils in the public school where Mr. Chantry made the exhibit and gave his talk on nature study as it relates to bees.

We did the same thing as Mr. Chantry mentions on two occasions, several years ago, in one of the Chicago public schools. It seemed to create a good deal of interest among the school pupils. We think it was in the 6th and 8th grades. Such object lessons always pay well, as it adds to the fund of useful information of the pupils, and also creates an interest in bees and honey.

Sketches of Beedomites

FRED W. MUTH.

Fred W. Muth, whose picture appears on the first page this week, is President and General Manager of The Fred W. Muth Co., of Cincinnati, Ohio.

Mr. Muth was born in 1869, and the first 20 years of his life he assisted his father and brother in the honey-business. The next nine years he was connected with a wholesale grocery business, in which concern he filled almost every position, and obtained a thorough business training. His old employer, Mr. Robt. J. Smith, manager of the concern, now retired, was, and is to-day, one of his best friends. When Mr. Muth entered the honey-business on his own account, he and his good wife were the only ones who seemed to realize his ability. They cheered him on, and from the beginning he was determined to be successful, for he felt that he was the right man in the right place. His friend, Mr. Smith, pointed out to him exactly how hard it is for a young man to gain a firm foothold in this world. He did not discourage him, however, for he knew his qualifications exactly from a business standpoint. The result is that the business of the Muth firm to-day is far beyond his expectations.

The American Bee-Keeper recently said this of Mr. Muth:

> Mr. Muth has traveled during the present year over 11,000 miles to buy and sell honey. As the representative of the firm which bears his name, Mr. Muth is known everywhere among manufacturers where honey enters into the composition of their product. The fact that Muth has, during the past ten weeks, sold upwards of 500 barrels of honey, is convincing evidence of the young man's ability to perperpetuate the record of his lamented father, the late Chas. F. Muth, who, for years, we believe, bore the reputation of being the most extensive dealer in honey in the United States.
>
> Mr. Muth has grown from infancy among the bees and barrels of honey, and while it has been stated publicly that adulteration of honey could not be detected in many instances, Mr. Muth assures us that though the adulteration be but 5 percent he can positively detect it, and in all his transactions "Purity" is his watchword.
>
> Mr. Muth seems to take especial delight in introducing the use of honey with manufacturers who have formerly had no knowledge of its superior qualities along their lines of business, and to this fact, doubtless, his extensive sales are largely attributable, with a consequent benefit to the producer by extending the consumption.
>
> Mr. Muth is a member of the executive committee of the recently organized bee-keepers' association of Hamilton county, Ohio, in which organization his expert skill and progressiveness are generally recognized.

We are pleased to present Mr. Muth to our readers through his picture, which is an excellent one. It was our pleasure to know his sturdy father before him, and we have also met the energetic son. Mr. Muth is, and has been for sevecal years, one of our regular advertisers, and we are glad to know that he is building up a honorable and profitable business, both in bee-keepers' supplies and honey.

Honey as a Health-Food is the name of a 16-page leaflet (3½x6 inches) which is designed to help increase the demand and sale of honey. The first part is devoted to a consideration of "Honey as Food," written by Dr. C. C. Miller. The last part contains "Honey-Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by every one who has honey for sale. It is almost certain to make good customers for honey. We know, for we are using it ourselves.

PRICES, prepaid—Sample copy free; 10 for 20 cts.; 25 for 40 cts.; 50 for 70 cts.; 100 for $1.25; 250 for $2.25; 500 for $4.00; 1000 for $7.50. Your business card printed free at the bottom of the front page, on all orders for 100 or more copies. Send all orders to the Bee Journal office.

◆

Why Not Help a Little—both your neighbor bee-keepers and the old American Bee Journal—by sending to us the names and addresses of such as you may know do not now get this journal? We will be glad to send them sample copies, so that they may become acquainted with the paper, and subscribe for it, thus putting themselves in the line of success with bees. Perhaps you can get them to subscribe, send in their dollars, and secure for your trouble some of the premiums we are constantly offering as rewards for such effort.

Convention Proceedings

THE LOS ANGELES CONVENTION.

Report of the Proceedings of the 34th Annual Meeting of the National Bee-Keepers' Association, Held at Los Angeles, Calif., Aug. 18, 19 and 20, 1903.

(Continued from page 759.)

FOUL BROOD—FORMALIN, ETC.

Delos Wood—Is it possible by spraying live bees in the hive with formalin, to cure foul brood, and then let it alone?

Mr. France—Well, we are in our infancy yet on that; what little I have tried of that, some 40 cases, I have lost some 30 of them.

Mr. Wood—The reason I asked the question, a friend of mine has been discussing it, and he takes the position that it would kill the germs, but not the brood.

Mr. France—One thing in this little pamphlet: One man says: "I got foul brood from supply-dealers. How do we know where they get their foundation?" Now, here is an experiment to test that: A prominent Wisconsin bee-keeper, some years ago, had foul brood among his bees so bad that he lost 200 colonies before the disease was checked. Having a honey-extractor and comb-foundation machine he first boiled the hives in a large sorghum pan, then in a kettle. All combs were melted; after the honey was extracted the honey was boiled, and also the extractor and implements used. The bees were returned to their hives on comb foundation he made from the wax from the melted combs, then fed the boiled honey. Several years have passed, and there has been no signs of disease in his apiary since.

Question—How long was it boiled?

Mr. France—Just long enough to get the honey out of the comb. Here is another one: I took out of 11 of the worst infected apiaries in my State, old, black brood-combs full of foul brood, rendered them into wax, took that wax myself to the comb-foundation factory, and had them make it into comb foundation. Then I had the cheek to go right into 20 of the best bee-yards in Wisconsin, where no disease had ever been known, had the same placed in 62 of their best colonies, and in every case no signs of disease have appeared. Those same colonies continue to be the best in the various apiaries.

Say, can you get the other fellow to do that? I would like to know the results, though. For six years I have been trying to see what I could do. Now, if it develops in your yard, I will take the hive out the day it appears, and put your price on it. There were all together 62 colonies that I put that foundation in, and the 62 colonies in those yards were the best in those yards. Now, you throw away that idea of comb foundation from supply-dealers carrying the germs of these diseases.

C. B. Denison—Do you ever boil the combs? One thing, we never would kill foul brood with the sun-extractor.

Question—Upper combs from an infected hive that had some honey in—could we use those combs another season, in case there should be a little foul brood up there, cut out that piece, and use the comb in that shape?

Mr. France—First, if I had combs, bright and nice brood-combs, I would extract those combs, give them an extra heating, if you please, and get them as dry as possible; then I would give those combs a good fumigating, and then an airing, and I think they would be safe. To make a positive assurance of it, I would make them into wax.

Question—What would you fumigate with?

Mr. France—Formaldehyde gas; spraying does not seem to have very good effect.

Question—Don't you think we are temporizing with disease when we are trying to save the comb?

Mr. France—Yes, I think we are.

Frank E. Atmore—What do you do with the frames?

Mr. France—I usually burn them. In a lot the other day, where I was, we had two wagon-loads, two-tiers deep of combs that we were going to render up into wax, and they were black enough! They had been used for years, but the frames the owner wanted to save. Adjoining there was a sawmill. I went down to the mill, found a vat where we could attach a steam-pipe to. I made arrangements there to have that vat and all the exhaust steam we wanted from the boiler. (I have been so accustomed to getting everybody around to help me.) I got up into the wagon, where I could superintend it, and handed those frames, one at a time, to a man who dropped them into the tank, where a man on the other side with a stick would stir them around, and the wax was almost immediately melted. and then he would throw those frames out into a pile. Those frames we put foundation in, and put them back into the hives.

Grenville J. Lynn—Twelve years ago this last winter I bought an apiary, and in the spring, when I went to look at it, I found a number of cases of foul brood. I was like some of these bee-keepers seem to be. I did not want to destroy the nice, white combs. I had a little correspondence with Prof. Cook, and he cautioned me against using any of it in the hives, or the hives either, until they were thoroughly cleansed. At that time Prof. Cook thought the best way to purify the hive was to air it. I did so. However, I found some very white combs that had been used for rearing brood. My father prevailed upon me to put three of these combs in separate hives and mark them. Just about the time the brood was being capped up, in each one of these frames or combs, the foul brood developed. I would like to ask, Why was that? Was that some outside condition? This was after I had cleaned out all the foul brood in the apiary, and I had taken pains to carry every hive into my extracting-house. I would not open a hive in the yard—took them all into the house; shook them out according to Prof. Cook's plan, and now the 37 colonies that I transferred I do not know of a single one to go back to foul brood except those three that I put those three white combs into; the foul brood appeared in those combs, and those only. Now, then, where did it come from, if it was not in those dry, white combs? There was not a particle of honey, nor brood, nor anything on that comb that I put in—just simply the dry comb. Since then I have had a good deal of experience.

Mr. France—Did you first put those bees on the starvation plan before they had those dry combs?

Mr. Lynn—No, sir, I did not. I was working under Prof. Cook's instructions, and I was going to "give him fits" if I failed. So I simply carried my hive into the extracting-house. If I found foul brood in that hive I shook the bees out about two feet from the ground. If I found the queen I caged her because I didn't have any bees to lose. Then, if there was any muss made there I would brush that away, and let them crawl right in on that clean foundation. I dipped the hive in boiling water for about two minutes; I found that was long enough to melt all the honey, and I was careful, very careful, never to touch the inside of the hive, or touch the frame in any way at all, from the fact that I had to handle them when I knew they were infected with foul brood. I would take them out with a stick, and then go into the house and wash my hands thoroughly with soap. Prof. Cook says wash them with something stronger. So I put them out on the old hive on the comb foundation. I want to say this: I kept one colony that I had kept for ten, yes, eleven years, and there was no foul brood ever developed in those hives I ever treated at all.

Mr. France—When did you get those foul combs—that colony that you have treated—when did you give them the new combs?

Mr. Lynn—They had filled them the season before?

Mr. France—What was in the hive when those bees went in?

Mr. Lynn—The comb foundation. Let me explain this: The hives that I put those three combs into were colonies that I had shaken out, and the bees had crawled in on the full sheets of comb foundation. They had built up their combs. In each case, I marked them so I could make no mistake. Then, as soon as the comb was capped, foul brood appeared, and it did not appear in any of the other hives. I was convinced, from information I had secured from Prof. Cook, that I was treading on dangerous ground if I used any combs in the apiary from infected hives. And these were the only ones I did use, except where I found them in the supers from healthy brood. If I found a hive where the bees had died out, no matter how white the combs were, I melted them up and got new foundation.

Prof. Cook—I do not like this discussion. It reminds me of the old coachmen's story. When asked how near he could drive to a precipice and not go over, one answered, "Six inches;" another said, "Three inches;" but the one who said he would keep as far away from danger as possible was the one who was engaged. Now, in dealing with foul brood, I would keep just as far away from danger as I could. When you are "monkeying" with anything like this disease, I think you are making a great blunder. If we have diphtheria in our homes, we have learned to be very careful to prevent its spreading. We know of these bacterial diseases, and do not fool with them. Suppose you *can* save a few combs. I do not like these questions. I would say, "Don't take any chances at all!" [Applause.] From my own experience and observation that is what I feel like saying. I think I have written thousands of letters in which I have taken this ground.

Dr. Miller—There is sometimes a little danger that hastily you may go too far to one side or the other. That is perfectly safe advice as far as the disease is concerned. If I find a colony afflicted with foul brood, to destroy the whole thing. Would you save the bees, Professor?

Prof. Cook—Yes, I think I can save the bees without taking any chances.

Dr. Miller—I would not take any chances on the *bees* if I had only one colony. I would burn the whole thing, root and branch. It is an easy thing with me, when I have only one colony, to burn up bees and everything; all my tools and my assistant—but I don't know where I would get another! But when it comes to having a whole apiary, that is a different matter.

Prof. Cook says I can safely save the bees. Thank you for that concession. Here is another man, McEvoy, who says I can save the hives. Somebody else says I can save the frames. I would like to save all I can when it comes to the large numbers. Now, we are not certain yet whether we can save the combs or not. If I can feel as safe in saving the combs as I can the bees, I would like to. Mind you, I don't know! I would like to, if I can. There is pretty good authority. Prof. Harrison, of the Ontario Agricultural College, says that he has tried fumigating the germs of bacteria in the combs for that. and there has been no development. Now, I don't know whether that can be entirely relied upon without some further trial. It does not look to me very reasonable. Mr. France says he would hardly feel safe in assuming that the germs would be killed under the pollen. I believe the formalin would work through pollen quicker than through the honey. But yet, he says under the pollen the germs have not been killed. It is just possible, is it not, that he may be right? If he is right about that, thousands and thousands of dollars may be saved in the combs. Let us find out first whether there may be any safety in that. Why not? Prof. Cook has given you the *safe* thing, but if you carry the thing to the extreme, you will not even save the bees. Let us find out how far we can go in safety. If you take that ground too solidly, you would never make any progress. Let us try if there is something further that we can save.

George M. Wood—I wish to say something on cleaning out frames. I think you will all find it a very correct and true process. It is a home process, and one that will never fail. Hot water, and anything you may put in it is all right. Fire alone will save them better. I put one or two frames on a pile, and I have some old timber ready to burn. I hold the frames over the fire, and the wax will boil like oil. When they commence to singe the frame, wait just a little and swing it out, the air will put out the flame. Now, when this wax ceases to boil, and the wood begins to burn, the germ is killed, and it will never revive. Then throw them off. But first, never touch them until you are sure your hands are clean; and your frames are as good as new. If hot water will save them in two or three minutes boiling, this heating in a flame of fire is far superior. It does not cost anything; it does not destroy your frames.

B. S. Taylor—I believe this is a vital question to Southern California, and I am a good deal like the superintendent of the plant was two years ago. I was building a house for an electric plant; I was afraid, and I asked him if there was any possible danger. "Not a particle," he said; "but I advise you to be extremely cautious." I have seen this foul brood spreading so much through carelessness. I have burned up a number of colonies; I believe we want to be very cautious.

Mr. Harbison—I fully agree with Prof. Cook in the matter of heroic treatment. As I stated to you last night, I had a bitter experience in '59 and '60 with foul brood, and since that time I have had no further experience in that line, because I wiped it out. Save your hives and your frames by thoroughly boiling from five minutes to half an hour. Be sure your water is thoroughly boiling. You can easily and safely save your frames and hives, but do not fool away your time by trying to save comb.

THIRD DAY—AFTERNOON SESSION.

This session was called to order at 1:30 o'clock, with Pres. Hutchinson in the chair.

The Committee on Memorials then reported as follows:

REPORT OF COMMITTEE ON MEMORIALS.

The Committee on Memorials recommends the adoption of the following minute:

Resolved, That we recognize the loss to our calling in the departure of such bee-keepers as Chas. Dadant, Dr. E. Gallup, Dr. A. B. Mason, R. Touchton, R. Wilkin, J. H. Martin, Thomas G. Newman, Mrs. A. J. Barber, and others. We shall miss their kindly co-operation, and their generous contributions, from their long experience, to the general fund of apicultural knowledge. Long may their memories remain green in our hearts in the years to come.

C. C. MILLER, *Chm. Com.*

On motion, the foregoing was unanimously adopted.

APIARIAN EXHIBITS AT ST. LOUIS.

Mr. O. L. Hershiser presented the following:

WHEREAS, It is desirable that the bee-keeping interests be properly recognized at the Louisiana Purchase Exposition, by apiarian exhibits from the several States of the Union and by foreign States; and,

WHEREAS, The apiarian interests may receive the recognition to which they are entitled, it becomes necessary to bring the matter to the attention of the proper authorities in the most weighty manner possible; therefore, be it

Resolved, That our efficient and energetic General Manager act for this Association in all matters looking to the bringing out of a representative apiarian exhibit at said Exposition; and especially that he correspond with the Boards of General Managers appointed to represent the several States, urging them to make an allotment out of their appropriations for the State exhibits at said Exposition, for State apiarian exhibits.

On motion, the above was adopted.

Mr. E. J. Oatman, once an extensive bee-keeper in Kane Co., Ill., was present, and introduced to the convention. He also made a few remarks.

The Committee on Resolutions reported as follows:

REPORT OF COMMITTEE ON RESOLUTIONS.

Resolved, That we extend thanks to the members of the National Association for their liberal attendance from other States. We trust that your stay with us may be both pleasant and profitable. We heartily welcome you, and trust that in the near future you will meet with us again.

Resolved, That we extend our thanks to the press of Los Angeles, and all committees that contributed to the success of this meeting, especially to Geo. W. Brodbeck.

Resolved, That we extend heartfelt thanks to the citizens of Los Angeles for their kind and hospitable treatment of the members of our Association during our stay among you. We shall long remember you, and look back with pleasure to this meeting with you.

Resolved, That a copy of this resolution be transmitted to the mayor of the city of Los Angeles.

Resolved, That we extend thanks to the California bee-keepers for their hospitable treatment of our members from abroad. We also thank you for the kind reception given in our honor Tuesday night last, and for the nice music, and above all else for the fine and comfortable Hall that you have placed at our disposal. Our stay with you will be long remembered, and will be looked back to as one of the greatest pleasures of our lives.

Resolved, That we extend thanks to the retiring officers of our Association, for the efficient manner in which they have conducted the affairs of their offices during the past year.

J. M. HAMBAUGH,)
A. I. ROOT, *Com.*
H. H. HYDE,)

On motion, the foregoing resolutions were unanimously adopted.

(Continued next week.)

Amerikanische Bienenzucht, by Hans Buschbauer, is a bee-keeper's handbook of 138 pages, which is just what our German friends will want. It is fully illustrated, and neatly bound in cloth. Price, postpaid, $1.00; or with the American Bee Journal one year—both for $1.75. Address all orders to this office.

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

Sisters Joining in Co-operation and the National.

The bees are going into winter quarters in good shape, and did well the past season. Honey is too low in price, so all have gone into the Central California National Honey-Producers' Association, and we can wait until it will bring enough to pay the producers to put it on the market.

Merced Co., Calif., Nov. 6. MRS. ARTIE BOWEN.

Sure enough, why shouldn't the sisters have the benefit of co-operation as well as the brothers? Is there any reason why the sisters should not be members of the "National," and have the benefits that the brothers enjoy there? To be sure, you may think, "Oh, I have only a few bees, and it won't pay." But, remember, if you do get into trouble and need help you can't send in your dollar and become a member after you are in trouble and expect the Association to help you out then. Better send in your dollar right away, and become a member now.

Besides, if you never need help personally, the grand work that the Association is doing in suppression of adulteration, etc., and in looking after the interests of the bee-keeper in general, entitles them to your support. Perhaps you have never looked at it in that way, but when you come to think it all over, should not the sisters as well as the brothers have a part in the grand work?

To tell the plain truth, the thing never appeared to me in just that light before. In fact, I never thought much about it. But I am sending in my dollar. I want to give my mite to help the good work along.

Newspaper Bee-Lore.

The following, clipped from the London Chronicle, was written by some one (let us hope it was not a woman) who seems to have been trying to see how many errors he could get into a single paragraph:

"Robber-bees are always a source of anxiety to bee-keepers, and at this time of year the marauders seem particularly active.

"Having gathered no honey, or, at any rate, an insufficient supply for themselves, they will descend upon a hive, kill its industrious occupants, and carry off the golden treasure in an astonishingly short space of time. We know of a recent instance in which the attack was developed and the home bees killed in a couple of hours. Sometimes a hive will attack a neighboring hive. In such cases the old straw 'skip' was better than the modern arrangement, for a knife thrust through the top would break the comb and set the honey free, at which the thieves would instantly return to seal up their own store."

Sugar Candy for Winter Stores.

1. Can bees fed on candy made of sugar, live through the winter?

2. Can they liquefy it without water, when the sugar is boiled sufficiently to make it into a solid cake?

I have several colonies that have no honey, and will have to be wintered on sugar, if at all. I have fed them sugar and water until now.

I consider the American Bee Journal one of the best papers published, and the Sisters' department very helpful.

Morgan Co., Colo. MRS. J. H. GILMAN.

Yes, bees fed on any preparation of granulated sugar will live on it through the winter, unless it be in some form that prevents their using it. Taken all in all, there is probably nothing quite so good for bees to live on as sealed combs of honey, yet some think they winter better on sugar syrup or candy. Very likely the sugar is better than some samples of honey, and most surely better than some samples of honey-dew.

2. You will find that the bees will liquefy the candy

without trouble. There is generally no trouble about sufficient moisture in a hive in winter. Keep close watch of a strong colony toward spring, and you may often see a little stream of water running out of the hive-entrance. Look into a hive in the cellar, and you will see drops of water often standing on the back wall. Whether it be that moisture settles upon the candy, or the bees furnish the moisture through their tongues, or both, the fact is that experience shows that candy answers a very satisfactory purpose in winter, and after cold weather sets in it is much to be preferred to winter-fed syrup.

Honey Cough-Medicine.

The following is clipped from a newspaper:

"For a cough, boil an ounce of whole flaxseed in a pint of water, strain and add a little honey, the juice of two lemons, and an ounce of rock candy. Stir together and boil a few minutes. Drink hot."

Contributed Articles

Propagation of Foul-Brood Germs.

BY J. E. JOHNSON.

On page 696, Mr. C. P. Dadant, I think, threw considerable light on the subject of why wax is immune and does not spread the disease of foul brood. Begging his pardon, however, I am entirely confident that he is wrong in regard to the power of spores to resist heat in boiling water. It has for many years been an established fact that spores (not bacilli) of some species can withstand three, or nearly three, hours of dry heat at a temperature of 284 degrees, and nearly 60 minutes of 212 degrees F. in boiling water. The non-sporulating bacteria are, as a rule, much more easily destroyed.

At the present time there is something like 1200 different bacteria known (those not known may be even more numerous); all, or nearly all, medical colleges have the different bacteria in cultures, and have experimented with them, so that it is no longer guess-work as to how much heat they will withstand, or how much of this or that it will take to destroy them; but the question in medical practice is, if the germs of disease have found lodgment in our systems, what will destroy them and not injure the system? In fact, in treating disease it is as yet not generally on the plan of killing the germs so much as it is on the plan of aiding the system to throw off the pathogenic effect of the germs. In many cases the germs would still be present in the system, but made non-pathogenic when the remedy had effected a cure. I see in the daily papers remedies advertised and guaranteed to kill every germ in existence, to be taken internally; if such should be the case we would soon die if we took the remedy, even though we did not become poisoned, as even the digestion of our food is more or less the result of certain germs belonging to the bacterium family.

It is not so much that the life of a spore can resist such severe treatment as boiling, but it is because the capsule or shell of the spore is endowed with such resisting qualities. If we could take a spore and crack the shell open, even the sunlight would soon be fatal to it; but when we consider that spores are so small that 1000 would have ample room on the point of a pin or a cambric needle, it would take quite a while to crack the shells of a bushel or two.

The standard disinfectant at present is saturated steam at a temperature of 100 degrees C. (which is equal to about 245 degrees F.) for about 15 minutes; dry steam, although equally hot, would take a much longer time to kill spores.

Yes, it is strange that any form of life will stand so severe treatment, but it is true, nevertheless. In fact, the whole great subject of bacteriology is strange, but it is a science now well estsblished and quite accurate, as far as established. I think Mr. Dadant is probably right about the spores becoming mummified or coated with melted wax so as to be harmless.

I do not know, but let me offer an explanation: That the brood will not become diseased by coming in contact with the spores, but only when taken as food; also, that when spores are soaked in hot wax, or even if not very hot, it may penetrate the shell of the spores so as to prevent any future development, and so be rendered forever harmless, though not dead.

Bacillus alvei being reproduced from spores, it would be among the hardest to destroy; but it may be possible that even though the spores of bacillus alvei can withstand two hours ordinary boiling, they may become coated and harmless in melted wax even though not boiled. If such be the case, it must be because the disease cannot be contracted except through food.

I think it very doubtful if oil of eucalyptus would kill spores, but any antiseptic that can be used in the hive without harm to the bees would kill bacilli, and prevent the spores from propagating, to some extent at least. An antiseptic is next in power to a disinfectant, and if oil of eucalyptus can be used in a hive of bees without injury to the bees, it would have many advantages, as the temperature of the brood would be such that the spores would be in active reproduction, hence much more easily destroyed; or, in other words, the antiseptic properties of the oil of eucalyptus, if pretty strong, would kill the bacalli, and, as the spores would develop, the antiseptic properties would kill them before they could again sporulate. At least this mode of treatment would be worthy of thorough trial.

Although there is no spontaneous generation of germs, there is some strange behavior of germs. For instance, people may carry the germs of the genuine diphtheria in their throat all their lives, and they would grow and propagate there, but would be non-pathogenic and harmless; but such germs can at any time, under favorable conditions (probably by the aid of other germs), take on a pathogenic state and develop a case of genuine virulent diphtheria, and when once started it would be contagious. When the disease could be stamped out or cured the patient would still harbor and propagate the same species of germs, but they would then be non-pathogenic and harmless. The disease of blood-poison is the result of a combination of germs.

I wish to correct some mistakes I have made on page 700. Through carelessness I said that formalin was gas from formaldehyde and 40 percent water. It should have been from 40 percent formaldehyde *and water*. On page 648 occur some typographical errors, and some on account of my careless writing. The name Mewman should have been Newman. I asked the question, "What was the diet of the foul bacteria?" and was made to say "that the diet was nitrogen;" the word "that" should have been "what." Also by omitting a line, I was made to say there may be spontaneous generation of vegetable life. In reality there is no more spontaneous generation of germs than there would be of people. I know we should be very careful when writing for publication, and hope I may do better in the future. I may not be able to do much good, but I certainly hope to do no harm. Knox Co., Ill.

Care With Foul Brood—Eucalyptus Oil Treatment.

BY C. P. DADANT.

Mr. C. P. Dadant:—I just now read your article on page 696, and take the liberty to write to you and ask you to give me a little advice.

I have about 80 colonies of bees which I have worked for extracting. I have had two and three extracting supers on the hives, and have secured a good crop of honey.

About two or three weeks ago I discovered in one colony that I had bought last fall, and which I had transferred last spring in a new 8-frame hive (I brought 10 colonies from the same party, the others are all right), in the hive-body next above the brood-chamber, a good deal of dead brood, what seems to me foul brood. Several days before I discovered this I had taken off an upper super of honey, had extracted it, and mixed the combs with the other extracting-combs, which I intended to put back on the hives. Maybe I did put these frames on the hives, or I may have them in my extracting-room; and maybe they were amongst a lot of supers which were set outside to make room and the bees began to clean them out. On Sept. 19 I had also taken combs off to extract, and they may have been put on other hives. What I wish to say is, maybe my other bees have had access to the combs of the infected colony.

The colony with the dead brood I closed up when I discovered the difficulty, and moved it about 10 miles away to a place where I do not think there are any bees.

Now I would like to ask you this: I have perhaps 150 or more extracting supers which need cleaning out by the bees. Would you pile them outside, and let the bees clean them out?

I have read your article about leaving the enameled sheets on the hives and putting supers back on hives, and have done that, but looking, these cool mornings, in the top super, where I had three extracting supers piled over the enameled cloth, I found a cluster of bees in the super, right under the cover, which shows that they don't travel back into the brood-chamber. Other hives where I had empty supers piled on, had some honey in all frames again, and some cells capped. It is getting late in the season, and I have to run all these frames through the extractor again, and I would like to pile the supers out and let the bees clean them up, but I am a little afraid to do so. Would it be advisable to treat these frames with oil of eucalyptus before I give them to the bees?

I have never had any foul brood in my apiary, and I don't know whether I have it now, but it looks suspicious, and I would like to avoid its spreading if I could do it. I have looked through all my other hives and have found no other colony affected. The colony that has the dead brood stored considerable honey this season.

St. Louis, Mo., Oct. 30.

I do not count it any trouble to answer enquirers on the subject of foul brood. It is a matter of most vital importance to all of us, and the only way to bring about success in eradicating it is to enquire and report after trials of means of treatment. That is the only method by which we can get to some positive conclusion. We must bear in mind that not a single one of the remedies advocated by different persons has proven efficacious *in all instances*. It is either because the remedy was not tried with enough care, or because the disease was more virulent in some cases than in others. We see the same thing in diseases of the human race. The remedy that has saved some lives turns out inefficient in others.

But let us make sure, first, whether it is real foul brood that your bees have. The most of us are apt to get badly frightened when we see any dead brood at all. The party mentioned in my article previously was very much worried, when the disease appeared, and he tells me now that he had already destroyed one colony by fire, when he wrote me about the disease. He seemed so anxious about it that I took the train at the first opportunity and went to see for myself. Yet the cure was effected in so short a time that he now jokes about his fears. After the publication of my article he wrote me that he had used the eucalyptus just 22 days.

But dead brood, in any case, should be very much mistrusted. I kept bees for 30 years or more before I saw anything in the way of dead larvæ, except patches that had been chilled by exposure, and it is noticeable that chilled brood is usually in patches, every larva being dead, with a very plain odor of carrion when it has had time to decay, while other diseases show a dead larva or chrysalis here and there. At the first sight of a dead larva in a brood-comb, I should have pronounced the disease foul brood, had I not been informed better by men who had seen different forms of disease. The authority of these men is positive. Foul brood in all cases at a sufficiently advanced stage shows plainly ropiness and coffee color, and looks as if it might be liquefied brown rubber, though it does not string out much more than half an inch or so. Any other form of dead brood is less dangerous,

Whether in the present instance it is true foul brood or some other disease of a milder nature, it is best in your case to try the disinfectant recommended by Weber, with formaldehyde, on all supers that have been emptied, without exception. There is evidently much doubt of the efficacy of this remedy in disinfecting combs containing dead larvæ, and especially sealed brood, but I believe that, judging from the testimonials given, combs that contain neither brood nor honey can be successfully treated with this drug. Those super-combs are empty and in good shape to be thoroughly disinfected by a careful treatment. If they are all treated at one time, in a very tightly closed room, it will make a short job, and they ought to be sufficiently disinfected to run no risk of carrying the disease with them to the bees in the spring.

The greatest advantage of eucalyptus, if it should prove of value in true foul brood, as has been claimed by several European apiarists, is that it would not require the removal of the combs from the bees. On empty combs, away from the hive, it seems as if formaldehyde would be a much stronger remedy. It might not be a bad plan to try both. If formaldehyde proves sufficient, it does the work at one or two times at least, while eucalyptus must be renewed from time to time for a few weeks. A treatment of bees by eucalyptus, at this season of the year, would not be conclusive, because there is not enough brood reared to make sure of the disappearance of the disease. So the colony or colonies ought to be treated again in the spring.

Judging from your statement, it is quite possible that you have spead the disease by giving the combs of the diseased hive back to others. I would by all means avoid the risk of spreading it any further, and therefore would not give any of the supers to the bees, either on the hives or in open air, until they are thoroughly disinfected. I would not under any consideration expose the combs to be cleaned out in the open air. Besides the risk of attracting bees from other apiaries, you would excite your bees and give them bad habits. The habit of robbing, and lurking about buildings and empty hives or weak colonies, is contracted easily in that way.

Another fault of giving the combs to the bees in the open, is that they do not clean them or repair them, but simply rob the honey out with the greatest possible haste. In their hurry, they will damage them still more if they find it necessary or convenient, in order to get at the honey more readily. Many of us have seen combs open through the septum or foundation by the bees, to get at the honey on the opposite side, instead of taking off the cappings, just because it happened to be easier to do it that way. So the combs which you would expose in the open would be robbed of their honey without being cleansed or repaired.

If supers are put upon a hive, one at a time, the bees, if the colony is of fair strength, ought to clean it up within 48 hours in mild weather. It may then be removed and another put on, and if this is done during the evening there will be no trouble from robbing. The supers, which are piled on the hives two or three tiers high, and in which the bees have clustered, should be removed in the ordinary way, by shaking or brushing the bees out or by using the escape. Sometimes the removal of all the dry combs, leaving only those on which there are bees, will induce the bees to carry the remainder of the honey down to the brood-combs. It is only when the queen has moved up with the bulk of the colony that it becomes difficult to drive them down.

If your super-combs contain much honey, it is evident that you have extracted too soon, before the end of the harvest, and it may be advisable to extract once more. When the supers have once been cleaned they are all right for keeping over, even if they contain a little honey, for this is not in a shape to sour or attract robber-bees.

Hancock Co., Ill.

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

BEES GOING UPSTAIRS.

A remark is made on page 632 that it is rare for bees to move upstairs. Quite likely it is in the experience of some apiarists; but my extracting colonies provokingly often vex me with just that trick. The supers have excluders, but not very perfect ones. 'Spect the queen goes up Paul Pry fashion, and then founds a new Ilium there because it is not very easy to go back. The workers evidently don't know why the queen cannot come above, and often save for her, in a state of polished emptiness, the bottom of several combs.

IS DISPOSITION FROM THE DRONE SIDE?

Concerning hybrids, does the disposition, as to being cross or otherwise, come from the drone side? That idea is strongly advanced on pages 661 and 602. Now let us watch out for evidences for and against.

THAT CAGED QUEEN OUT-DOORS.

Wm. M. Whitney's colony, on page 655, is unique, and interests me very much. Caged queen out-doors on a table, shaded with a box, and individual bees come at their own option one at a time till several hundreds are around the cage. The number of bees we see bobbing around the entrances of totally empty hives show us that the bees of an apiary often get lost. I guess the Whitney swarm was composed of these lost bees. The "our crowd" spirit seemed to come to them easily. And the attempt to get the queen out of the cage by going through the process of swarming was beautifully in line with the notious evidently pervading bee-noddles. It was all right to build them up into a good colony; but had he devoted them and some of his own time more purely to the interests of science it would have been still better. How far can this volunteer ing of individual bees be carried, we should be glad to know? Next time let him shift the queen into a larger cage made of a bait-section of comb. Put half the bees inside with the queen and leave half outside—to stool-pigeon for more. Perhaps a piece of very young brood as big as the end of one's thumb given to the outsiders would help on. A little feed every evening, of course.

CYPRIAN AND CARNIOLAN BEES.

So Frank Benton still mourns that the general verdict was adverse to the Cyprians—and still sees gentleness in them. Put it strong when he thinks a man whose crop is 20 tons might have had 30 tons with just the right kind of Cyprian hybrids.

Mr. Benton is good authority on Carniolans, and he finds, it seems, that not occasional colonies, but all colonies, in their native home, have some yellow-banded individuals mixed in with them. Page 662.

EFFECT OF LOCATION ON TEMPER OF BEES.

That the same bees should be cross or gentle according to location is so queer that we are inclined to have a good laugh at it and then dismiss the idea. "Location," run into the pictures. There seems, however, to be valid evidence of just that state of things. Granting the truth of it, there must be a reason—and digging after such hidden reasons is one of the proper and profitable things for us to do. Sometimes, I reckon, the reason is just one word—skunks. Peace at night in one locality and midnight worries in the other. I think some nectars are faintly poisonous—not enough to do serious harm, but enough to make the bees feel viciously on nettles. Change the location and you change, in part at least, the source of supply. When one locality is well shaded and one of unmitigated heat—partly melting things down occasionally—a foundation for a difference in temper can come in there. And it's a well-known general principle that the bees are less inclined to attack when they see human beings every day moving about near by. Lonely out-yards ought to be some crosser than the home yard. Are there other reasons?

Mrs. Higgins, on page 676, says it depends largely upon who handles them. Yes, that's so. Changed location may get them handled in an idiotic and provocative way in which bees never ought to be handled. Page 662.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Feeding Light Colonies Now for Winter.

The bees are lighter in stores this season than they have ever been before. If I had known they were as light as they are I would have fed them early in the fall. They have always weighed from 60 to 80 pounds, but this season they weigh only from 38 to 54 pounds.

1. Will a colony in an 8-frame hive weighing from 38 to 40 pounds have stores enough to last until April 1, wintering in the cellar?

2. Is there any way that I could feed them now so they will have stores enough to last until April? I have them in the cellar now. I have about 8 colonies that are very light. How would it do to set them out some good, warm day for a flight, then fill some of the empty combs with sugar syrup. WISCONSIN.

ANSWERS.—1. When you ask about a colony in an 8-frame hive weighing 38 pounds, I suppose you mean the hive with bottom-board and cover. Wintered in the cellar under favorable conditions, you hardly need to worry much about its pulling through till April 1. At a rough guess, I should say that about 8 colonies out of 10 would make it. Two colonies may each weigh the same, and yet there may be several pounds difference in the amount of honey they have; one may have older and heavier combs than the other, and it may have a larger store of pollen. Two colonies under the same conditions, apparently just alike, and having the same amount of stores, may consume unequal quantities—I don't know why—possibly because one is of a more quiet disposition, and so consumes less. Although I should set 38 as the limit, and would much rather have a greater weight, yet if a colony in the cellar had that weight I think I'd let it take its chances rather than to trouble it before the first of April.

2. Don't try setting them out to give syrup after any sort of fashion. Syrup belongs to flying weather, and if you have no sealed combs now, feed candy after the instructions given in your bee-book. It might pay to buy section-honey to feed rather than to give syrup now.

Preventing Honey from Candying.

What do dealers in honey put in it to prevent it from candying? There is honey on the market here, put up in Chicago, that never candies, and they warrant its purity. I put mine up in pint cans, and after it candies many do not like to buy it. I believe tartaric acid will prevent it. How much dare I put in it without impairing the taste? IOWA.

ANSWER.—I somewhat doubt whether any honest dealer puts anything into honey to keep it from candying. I am afraid enough of any acid to prevent granulation would be an injury to the honey. Can you not educate your customers to reliquefy their candied honey?

Drone-Excluding Zinc—Crosses of Bees—Prolific Bees.

1. Is there any drone-excluding zinc that will not exclude the queen? If so, what is its cost?

2. Is a cross between Carniolans and Italians as good, or better than either crossed with the blacks?

3. Which is the most prolific bee? VIRGINIA.

ANSWERS.—1. Yes; or at least there was; the perforations barring the drones, but passing the queens.

2. Yes, probably.

3. The queen. Amongst queens the Carniolans are noted for prolificness.

Directions for Arranging a House-Apiary.

Is there any book published that gives definite directions for the inside arrangements of a house-apiary. If there is none, perhaps some contributors would favor us with the same in the Bee Journal. WASHINGTON.

ANSWER.—Perhaps Root's "A B C of Bee-Culture" has as much as you will find in any book. I suppose the chief thing as to inside arrangement is to have places for the lower tier of hives (the hives being the same as those used on the summer stands), shelves to support those above the lower tier, and passageways from each hive to the outer air so arranged that no bee can get out into the inside only when a hive is opened. I yield the floor to any one who will tell the best way to do this.

Hive for Comb Honey—Wintering Bees—Shade, Etc.

1. You have invited your readers to ask questions, and as I am a tender foot in the bee-business I accept your invitation, as I am anxious to get started right. I started one year ago last spring with one colony, and I now have 8. I am using the alternating hive, which is a 2-story hive containing 8 Hoffman frames, 16½ by 5½ to each story. Now, I want to know if this is a good hive for one who works for comb honey.

2. I could not get my bees to work in the super, and there was an abundance of alfalfa, buckwheat and other plants to work on. What was the trouble? Are my hives too large?

3. Would it do to use a queen-excluder between the two stories of the hive? or would it be detrimental to the workers?

4. Where is the best place to winter bees in this locality, on the summer stands or in the cellar?

5. Should the hives be set in the shade during the hot weather?

6. How much honey should a good, strong colony have to winter well?

7. What is the advantage of a two-story hive over a one-story?

8. What hive do you think is the best where one wants the honey in supers or comb honey?

9. My bees did not swarm much this season, and the one colony which filled the super first was full of brood in the center sections of the super when I took it off. Does it require the entire 16 frames for the brood? NEBRASKA.

ANSWERS.—1. It isn't so much the hive as the man and management. With right management there is no reason why you should not have success with the hive you have.

2. Your two stories of eight frames each are equivalent to 8 frames of the usual size, 17⅝x9⅛, and the trouble could hardly have arisen from too large a hive. It is hard to guess what the trouble was, and without knowing particulars it must be only a guess, but it is just possible that your colonies were not strong enough for good results.

3. The excluder would hardly help matters, for it would only give the bees more room to store honey in the combs from which the queen was excluded, while your desire is to have the honey in sections.

4. You are just about in the center of Nebraska, and the likelihood is that cellaring is best. Find out, however, what has been the experience of others in your locality.

5. It will be well to have them in the shade, especially for the comfort of the bee-keeper in hot weather, but it will not do to move them into the shade when hot weather comes; before flying in the spring they must be where they are to remain through the season.

6. For outdoors 30 pounds; in the cellar 10 pounds less may answer. As a matter of safety it is well to go beyond these figures.

7. I'm not sure what it is in all cases. The chief advantage in my own practice is that before the harvest there may be plenty of room to develop a strong colony, and when the harvest comes, reducing to one story gives all room needed by the queen during the harvest.

8. I'm not sure that I know. Possibly locality and management might make one best for one and another for another. For my own use I have 8-frame dovetailed hives.

9. Your entire 16 frames being of such small size, are scarcely too much for brood; at least one story would not be enough. If you mean that you allowed the two stories for the queen, and that she had brood in the center of the third story or super, I don't know what the trouble was. If you mean that you were working for comb honey in the second story, and that the queen laid in it, that is just what might be expected; for eight of your little frames gave her too little room.

◆

Number of Supers Needed Per Colony.

When the bees fill a super in the spring or early summer, how soon may this super be taken off and still be running no risk of honey souring, as I have read that it does if taken off too soon? What I am figuring on is to know how many supers will be needed per colony in a good honey season. ILLINOIS.

ANSWER.—Take off the super when all the sections are sealed. Or, take it off when all but a few of the outside sections are finished, and return the unfinished ones to be finished. No matter how early it is taken off, there is no need of its souring unless kept in a bad place. Keep it in a dry, warm place, and it will be all right. A place where salt will keep dry will be all right. A hot garret is one of the best places.

I don't clearly see just what your question has to do with the number of supers needed. That matter may be figured in this way: Get ready for each colony one more super than the average number of supers filled in the best season you ever had. Generally that will be more than you will need; but it does no harm to have some supers left over for a future year, and it's a bad thing to be caught short.

◆

Working Beeswax—Moulds for Same.

Where can I get information and books on working beeswax? and, also, where can I get a mould for the same? ILLINOIS.

ANSWER.—I suppose you refer to making comb foundation. I don't know of any book that gives information fuller than you will find in Root's "A B C of Bee-Culture." In this country foundation is made by means of foundation mills—run through a machine with two metal rolls, something after the fashion of a clothes-wringer. Foundation mills are manufactured by the A. I. Root Co. A few years ago many were making foundation, but gradually it has been given up to a few who make a business of manufacturing it, and it is doubtful if you will find it worth while to make your own foundation. In Europe, thousands of bee-keepers make their own foundation, partly because there is some difficulty in buying foundation made of pure wax—let us be thankful there is no such trouble in this country—but they use the Rietsche press, pouring the hot wax into the mould and pressing it. I don't know of any place where you could get a press of that kind in this country.

◆

Goldens or Red Clover Italians—Honey vs. Increase.

1. I had 10 colonies of hybrids, spring count, and took off 1035 finished sections of honey, and increased to 25 colonies. Now, I expect to try all goldens during 1904. Am I starting right? I ask this as I see no records given of the goldens as honey-gatherers, either average or leaders. I want the nice color and honey-gathering qualities combined, if possible.

2. Would it make crosser bees to cross the golden queens with red clover drones, than to leave the goldens pure?

3. Once I was puzzled what to do with my bees; they had swarmed once apiece, the brood-frames were chock-full of brood and sealed honey, giving the queen no room. Swarms and all were alike; I wanted comb honey, and no more increase; neither did I have a honey-extractor, or a single empty hive. Now, what was the course to take in this case? IOWA.

ANSWERS.—1. If you can do as well every year, you ought hardly to complain of the bees you have now. Goldens are not uniform in character. Some are reported as poor workers and others good. Their color does not necessarily make them either good or bad.

2. Probably not.

3. Pile on the sections, and possibly uncap some of the brood-combs if too well filled with honey. But remember that filling the brood-frames with *brood* does not usually restrict the queen, for the young bees hatching out provide empty cells for her.

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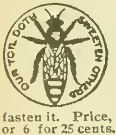
A Celluloid Queen-Button is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-lapel. It often serves to introduce the subject of honey, and frequently leads to a sale.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The picture shown herewith is a reproduction of a motto queen-button that we are furnishing to bee-keepers. It has a pin on the underside to fasten it. Price, by mail, 6 cents; two for 10c; or 6 for 25 cents. Send all orders to the office of the American Bee Journal.

FROM MANY FIELDS

A Good Wisconsin Report.

I summered in Clark Co., Wis., last year, but not liking the country, I moved back to Grant Co., Wis., last January. I went back in March after my bees, and brought down 26 colonies, but when I came to look at them 4 were queenless, and some of the rest were very light, so in May I bought 5 more colonies, making 26 in all. From 4 of them I did not get much honey, but from 22 colonies I got 4000 pounds of extracted honey, and 350 pounds of comb honey. Pretty fair, I think, for Wisconsin.

I paid $17 for the 5 colonies I bought, and sold $64.00 worth of honey from them. From one colony that did not swarm at all I extracted 336 pounds of honey. I had 2 top stories on them; I had only 1 top story on all the rest of my hives. If I had had 2 or 3 stories I believe I would have had 300 pounds of honey to a colony. I let them swarm just as they wanted to, then let the new colonies store comb honey. I had one colony that stored 255 pounds of extracted honey, and swarmed twice. Only about half of my bees swarmed at all.

I have 41 colonies in fine condition for winter, none weighing less than 60 pounds, hive and all. I hope next year will be half as good as this year was.

U. S. BOYD.

Grant Co., Wis., Nov. 19.

Bees Did Fairly Well.

My bees did fairly well last season. I had 5 colonies; from 4 I got about 130 pounds of comb honey; from the remaining one a swarm, but very little honey. A neighbor about ¼ mile away, who has kept bees for many years, says that it was a poor year; he got almost no surplus at all; so I think I made a success, and hope to do better next year.

WM. R. MARTIN.

Washington Co., Pa., Nov. 23.

Results of the Past Season.

We started with 54 colonies of bees last spring; they swarmed and increased to 112 colonies, and we got 2363 pounds of comb honey, and 801 pounds of extracted honey. We have sold $330 worth, and have some on hand yet.

MARION F. ANDREWS.

Des Moines Co., Iowa, Nov. 16.

Light Crop of Honey.

I have just put my 220 colonies of bees into the cellar for their winter sleep. We had a light crop of honey this year.

I. A. TRAVIS.

Wood Co., Wis., Nov. 16.

Report for the Season of 1903.

As the bees will not store any more honey this season, and it is cold enough to put them into the cellar, I will make a short report.

I started in the spring with 70 colonies; 2 were queenless, so I lost them. The rest built up quite fast, and commenced to swarm May 12, and if I was going to guess at the number of times they swarmed I would put it at about 50,000; but there was not that many, but I increased to 130. I returned as many swarms as I could make stay in the hive, and more than 20 went to the woods. After June 1 I could be with them awhile only in the afternoon, as I made a specialty of strawberries, and strawberries and bees are in season about the same time.

I use only the 8-frame dovetail hive, with shallow super for both comb and extracting. I got a little over 13,000 pounds of honey, counting the salable sections each 1 pound, of which 3500—I sold them at wholesale at 10 cents apiece; retail at 12½ cents; the rest was extracted, all white except 1200 pounds was white and amber mixed. I use the 3⅝x5

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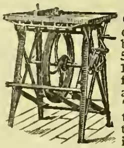

Read what J. I. PARENT, of Charlton, N. Y., says: "We cut with one of your Combined Machines, last winter, 50 chaff hives with 7-in. cap, 100 honey racks, 500 brood-frames, 2,000 honey boxes, and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make, and we expect to do it with this Saw. It will do all you say it will." Catalog and price-list free.

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sections; they will hardly average 14 ounces each, but they look better than the 4¼ sections.

I had several colonies each of which stored over 400 pounds of extracted honey. I think if I could have been with them more during June and part of July they would all have averaged 200 pounds to the colony, spring count. GEORGE A. OHMERT.

Dubuque Co., Iowa, Nov. 19.

Wet Season for Bees.

The past season was very wet for the bees. All the honey they got was from white clover, in June and July; later they did not gather enough to live on. I sold several pounds of honey at 12 cents a pound, just loose from the frame, not in sections; I could have sold several pounds more, but I want my bees to have plenty of stores for winter.

I had only 2 colonies last spring; one swarmed once, and the other twice. This fall I took off an 8-frame hive-body which had been put on the hive of one of the old colonies in June, and I found it plump full of white honey. no bee-bread at all. I took out 4 frames, and one of them weighed 6 pounds, which I thought was good weight; and the other 4 frames full I left in, and run a swarm in, which I had brought from the woods. So I have 6 colonies with plenty of stores for winter. I have cut down 7 bee-trees, but there wasn't 10 pounds of honey in the 7; they had combs 5 feet long, but nearly all was brood-comb.

I use the 8-frame dovetailed hive, and run for comb honey only. I winter my bees with supers on top filled with leaves, which I think will keep them dry and warm.

B. F. SCHMIDT.

Clayton Co., Iowa, Nov. 18.

A Season's Experience.

In accord with the editorial of last issue to "let our light shine," I am going to let my darkness shine (for I am only a beginner) for a few minutes, if you will.

I began the year with 3 colonies, Nos. 1, 2 and 3. I worked for extracted honey, for which I get 20 cents a pound, or one quart jar for 50 cents, the jar to be returned.

Having read several items in the bee-papers stating that it is not necessary to have a queen-excluder under an extracting super, that the queen would not go up there to lay, I did not put any on. A week later I went

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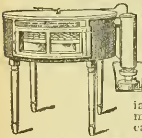

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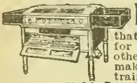

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through the hive and found to my disgust all vacant cells in the supers occupied by eggs, a great many of them drone-cells. After a careful search I found only one of the queens in the supers, and placed her below; this was No. 3. Then I put on the excluders, and closed up the hives.

The following Saturday (I can examine my hives only on Saturdays) I found the same condition of things in Nos. 1 and 2, and the brood-nest getting empty. Another careful search for the queens resulted in my finding No. 1, but not No. 2. For the following three Saturdays we had rain so I was unable to open the hives, but on the following Sunday I was called from church by a neighbor; my bees were swarming. I took the hive all to pieces looking for the queen again without success, cut out 8 fine queen-cells from one comb, and destroyed all others that I could find, and closed up the hive again.

Well, this colony swarmed every day from that Sunday for about a week, and I stayed at home two or three times to take care of them. I knew they would not go away, as the queens were clipped, but I wanted to stop their fooling and find the queen. Finally, despairing of finding her, I took queen No. 1 with the comb and bees on which she was, and placed it in the middle of the brood-nest of No. 2; took out all the old empty combs from another hive, shut it all up, and was about to go, when I found a group of bees on the ground, and on examining it I found my long lost queen! What was I to do, open hive No. 2 again and look for the queen I had just put in? Not much! I had enough of that. I simply ran No. 2 queen in at the entrance of No. 1 with a puff of smoke and went about my business. Very simple introduction, was it not? Notwithstanding all this fussing I got 119 pounds of comb and extracted (mostly extracted) honey from the 3 colonies, and made a new colony with one of the queen-cells from No. 2.

I had a good crop for this section. With this years' experience I hope to do better next.

A. C. JACOT.

Richmond Co., N. Y., Nov. 17.

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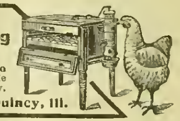

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Beedom Boiled Down

Carbon-Bisulphide for Fumigation of Combs.

Here is the experience of "A York County Bee-Keeper" as given in The Canadian Bee Journal:

Having a few hundred extracting-combs stored away at an out-yard, that had been left off the hives at last extracting as there is no fall pasture, I noticed at my last visit that the moths were bothering them a little. Having nothing at my disposal but a large empty box made of matched lumber, but minus a top, stacked the combs on the floor, placed a dish on top of them with about two spoonfuls of the drug, and then turned the box upside down over all.

I forgot to say that the combs were in an upper room of a dwelling-house, and although the floor was matched, lathed and plastered, the intolerable odor of carbon-bisulphide penetrated through all and makes things quite unpleasant for awhile. Did it kill the moths? Believe it would kill anything that was forced to inhale the horrible stench that it emits. Nevertheless it is a handy way of fumigating combs; away ahead of the old sulphur plan.

Sour Honey—What to Do With It.

Last spring I secured from another bee-keeper a few hives of bees. Wishing to increase them as much as possible I divided them. One nucleus that reared a young queen built up quickly and strong, and this fall I took 48 pounds of surplus honey from them. Now comes the queer part of it: While the whole 48 pounds was nicely capped, it was all soured, full of air-cells, and foamy, tastes and smells distinctly sour. Now that is something I never saw before. I should like to know the reason of it. I was thinking of using the honey as bee-feed to build up weak colonies, but intend to cook it first. Wouldn't it be a good idea to add sugar syrup to it? It seems to me the fault must be in the bees, and that hive is marked for re-queening. I will say for the old queen that, while this is her third season, she built a strong colony from a nucleus, and stored 85 pounds of honey. J. T. Reno, Jr.

Soured honey would be absolutely unfit to give your bees for winter food. I would advise you to extract all of it, and then feed the bees good, clean, pure sugar syrup. The honey that you extract you can improve somewhat by boiling; then for the purpose of stimulating brood-rearing you possibly can feed it out again to the bees next spring; but a better way would be to make honey vinegar of it. Such vinegar is much superior to ordinary cider vinegar.—Gleanings in Bee-Culture.

Late Feeding of Bees for Winter.

The very best way to feed bees which are found short of stores at this season of the year, is to get granulated sugar and melt it up, putting in just as little warm water as is necessary to liquify it. Then boil it over a slow fire (being careful not to let it burn, as burnt sugar is not good for bees) until it will harden when cool, into a solid cake. One can tell when it has boiled enough by dropping some of the liquid into cold water. When it is thick enough to harden thoroughly pour it into pans, and mold into cakes about 8 pounds in a cake, or a cake 3 inches long, 5 inches wide and 2 inches thick.

Lay some sticks about half an inch thick across the frames, directly above the cluster of bees, and put a cake of sugar on them. Cover this with an old sack, or any kind of heavy cloth, and if you wish, you can put on top of this some leaves, oats chaff, or several thicknesses of newspaper. Cover all up snugly and the bees will go through the cold weather all right, even though they do not have an ounce of honey. However, in that case, they should be fed a thin syrup in the spring, as soon as it warms up. What remains of the cake of sugar can be melted up for this purpose.

It is not a bad plan to put one of these cakes on every colony, as bees sometimes, during a long cold spell, get out of honey directly above the cluster, and die of starvation when there is plenty of honey in the hive in the other combs which they cannot reach. They form a compact cluster as soon as cold weather sets in, and never leave it until it warms up so bees can fly out. Bees never freeze in these clusters, if there is plenty of food directly above them, as they can follow the heat rising from the cluster, but cannot move any other way.—Modern Farmer and Busy Bee.

CONVENTION NOTICES.

New York.—The Fulton and Montgomery Counties Bee-Keepers' Society will meet at the Central Hotel, Market Street, Amsterdam, N.Y., on Tuesday, Dec. 22, 1903, at 10 a.m. This will be the regular business meeting of the Society for electing officers, payment of annual dues, and any other business which may come before this meeting. Annual dues, $1.00, which also includes a membership in the State and National Associations. T. I. Dugdale, Sec.
F. P. Jansen, Pres.

Missouri.—The Missouri State Bee-Keepers' Association will meet in Mexico, Mo., Dec. 15, 1903. J. W. Rouse will act as host to direct the attendants to the hall, which is free to all who desire to attend. Board may be had at the leading hotels at $1 to $2 a day. Come, everybody who is interested in bees and honey. Let us have a big meeting. We now have 51 paid-up members. Let us make it 100. Procure certificates from your local railroad ticket agents when you purchase your tickets. It may be you can return for ⅓ fare.
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PAGE

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FOR SALE!
White Clover Extracted Honey, which was all taken from upper stories with a queen-excluder between, and the combs were nearly all sealed solid before extracting. It is very thick, and has that fine rich flavor that only honey thoroughly ripened in the hives can have. I would like to obtain a few more customers who would appreciate a fine article. Price, in new 60-lb. cans, on board cars here, cash with order—one can, 8½c a pound; 2 or more cans, 8c; sample, 8c. References: George W. York, the A. I. Root Co., and the Chatfield National Bank.
49A3t C. MONETTE, Chatfield, Minn.

HONEY AND BEESWAX

MARKET QUOTATIONS

Chicago, Nov. 7.—The supply of comb honey is large, and sales are being forced, so that it is a little difficult to give accurate figures. Sales are not easily made of fancy at anything over 13c per pound, with less desirable grades selling lower. Extracted, white, brings 6@7½c, according to kind, flavor and package; amber, 5½@6½c. Beeswax, 28@30c.
R. A. Burnett & Co.

Philadelphia, Nov. 9.—Honey arriving very freely the last week and prices little easier. This month is best month in the year for demand of comb honey. We quote fancy white, 16@17c; No. 1, 14@15c; buckwheat, fancy, 15c. Extracted, white, 7@8c; amber, 6@7c. Bright yellow beeswax, 32c. We do not handle on commission. Wm. A. Selser.

Albany, N. Y., Nov. 27.—Honey market some lower since the cold weather and Thanksgiving demand over. We quote: Fancy white, 15c; No. 1, 14@14½c; buckwheat and mixed, 13c. Extracted, steady and quiet; buckwheat, 6½c; clover, 7c; mixed and amber, 6@6½c. Beeswax, 28@30c. H. R. Wright.

Cincinnati, Nov. 20.—The demand for comb honey is slower now than it was six weeks ago, owing to the enormous quantities offered on all sides. Fancy comb is sold in single case lots at 14c. The supply of extracted honey is big, although the demand is good. We are selling amber extracted in barrels at 5¾@6½c. White clover, in barrels and cans, 7½@8½c, according to quality. Beeswax, 30c.
The Fred W. Muth Co.

Buffalo, N. Y., Oct. 11.—The demand for white comb honey is better than it was. The trade is particular and wants only very white, clean stock. If the wax is yellow from travel-stain it does not sell well, and price has to be cut. Fancy white comb, 14@15c; A No. 1, 13½@14c; No. 1, 13@13½c; No. 2, 12@12½c; No. 3, 11@12c; No. 1 dark comb, 11@12c; No. 2, 10@11c. White extracted, 6½@7c; amber, 6@6½c; dark, 5½@6c. Beeswax, 28@30c.
W. C. Townsend.

Boston, Nov. 25.—Western honey is arriving more freely in our State, causing a slight drop in prices. Fancy No. 1, in cartons, brings 17c; A No. 1, 16c; No. 1, 15c. Extracted, white, 8½c; light amber, 7@7½c; amber, 6@7c, according to quality. Blake, Scott & Lee.

Kansas City, Oct. 23.—Receipts of comb honey good; demand good; market easier. Receipts of extracted light. We quote: Fancy white comb, 24 sections, per case, $3.00; No. 1, white and amber, $2.75; No. 2, $2.50. Extracted, white, 7c; amber, 5@6c. Beeswax, 25@30c.
C. C. Clemons & Co.

Cincinnati, Nov. 24—The demand for honey is a little better. The prices rule about the same. Extracted is sold as follows: Amber, in barrels, from 5¼@5½c; in cans about ½ cent more; water-white alfalfa, 6@6½ cents; white clover, 6¾@7½c. The comb honey market is quite lively, and it sells as follows: Fancy water-white, 14@15c. Beeswax in good demand, at 30c delivered here. C. H. W. Weber.

New York, Sept. 28.—Comb honey is arriving quite freely now, and is finding ready sale at 15 cents per pound for fancy white, 13@14c for No. 1 white, and 12c for No. 2 white and amber. Very little buckwheat on the market as yet, and prices are hardly established.

Extracted honey is ruling about the same as last with plenty of offerings of all grades.

Beeswax is somewhat declining and selling at present at from 28@29c per pound.
Hildreth & Segelken.

San Francisco, Oct. 21.—White comb, 1-lb. frames, 13@14 cents; amber, 9@11c. Extracted, white, 5¾@6¼c; light amber, 5@5½c; amber, 4½@5c; dark amber, 4@4½c. Beeswax, good to choice, light, 27½@29c; dark, 25@26c.

Market is more quiet than for several weeks preceding, but is fairly steady as to value. Spot stocks and offerings of both comb and extracted are mainly of amber grades, while most urgent inquiry is principally for water-white, the latter being the only kind meeting with much competitive bidding from buyers. Recent arrivals of honey included a lot of 121 cases from the Hawaiian Islands. The bees of the Islands feed mainly on sugar.

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In no-drip shipping-cases. Also Amber Extracted in barrels or cans. Quote your best price delivered Cincinnati. The Fred W. Muth Co.
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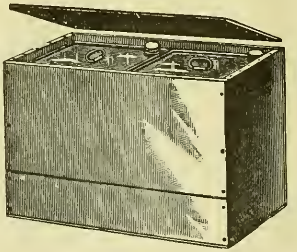

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One 60-lb. Can @8c	$ 4.80	One 60-lb. Can @9c	$ 5.40
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AMERICAN BEE JOURNAL

43d Year. CHICAGO, ILL., DEC. 10, 1903. No. 50.

Some Texas Folks and Things Apiarian.

(See page 789.)

No. 1.—Mr. and Mrs. H. H. Hyde.

No. 2.—Working with Holy Land Bees.

No. 3.—Apiary in a Mesquite Grove.

No. 4.—Apiary Among Spring Flowers.

THE AMERICAN BEE JOURNAL.

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GEORGE W. YORK.

DEPT. EDITORS,
DR. C. C. MILLER, E. E. HASTY, EMMA M. WILSON

IMPORTANT NOTICES.

The Subscription Price of this Journal is $1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

The Wrapper-Label Date of this paper indicates the end of the month to which your subscription is paid. For instance, "dec03" on your label shows that it is paid to the end of December, 1903.

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1st.—To promote the interests of its members.
2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

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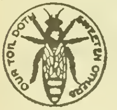
A Celluloid Queen-Button is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-lapel. It often serves to introduce the subject of honey, and frequently leads to a sale.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The picture shown herewith is a reproduction of a motto queen-button that we are furnishing to bee-keepers. It has a pin on the underside to fasten it. Price, by mail, 6 cents; two for 10c; or 6 for 25 cents. Send all orders to the office of the American Bee Journal.

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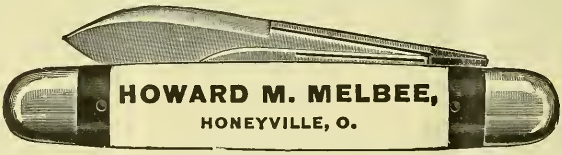

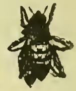

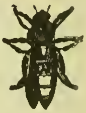

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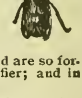

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a last-time, with proper usage.

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ESTABLISHT IN 1861
AMERICAN
BEE JOURNAL
THE OLDEST BEE-PAPER IN AMERICA

43d YEAR. CHICAGO, ILL., DEC. 10, 1903. No. 50.

Editorial Comments

The National Election this Month.

During this month the members of the National Bee-Keepers' Association will be called upon to vote for several directors and a general manager, whose terms of office expire with the end of this year.

We believe it is a good thing to have the directors scattered over the country as widely as possible. It would be better, we think, if there were only one director in a State, no matter what the membership of any State is, as the Association is National, not only in name, but in influence and in extent.

Canada should be represented on the Board of Directors by one member, at least. Mr. Wm. McEvoy has been prominently mentioned. We hope he will be elected.

But each voter should remember that he has the right to vote for any member he pleases, regardless of what anybody else may say.

Honey Superior to Sugar as a Food.

Dr. J. H. Kellogg, the well known medical authority, has given honey a strong endorsement in Gleanings in Bee-Culture. For the sake of the health of the public at large, it would be a fine thing if it could be copied by all the papers in the land. He says:

> I consider honey much preferable to cane-sugar as a food. It is practically a fruit sugar, and is ready for absorption. Eaten in moderate quantities it ought to tax the digestive organs much less than cane-sugar, and is to be commended.
>
> Many persons ought to be able to utilize honey who can not use cane-sugar. Adults often lack the power to digest cane-sugar. Cane-sugar is chiefly obtained from grasses and roots. It is a sugar adapted to herbivorous animals. One of the four stomachs of the cow secretes a ferment which is capable of digesting cane-sugar. Digestion of cane-sugar converts it into honey, so honey is practically cane-sugar already digested.
>
> Malt sugars are best of all, as they are adapted to the human digestive apparatus, being the natural result of the action of saliva on starch. I think maltose is preferable to all sugars; but honey comes next, and I frequently recommend my patients to use it when they do not find it convenient to use malt sugars. So I consider that you and your busy bees are engaged in good missionary work, and you have my hearty sympathy. Knowledge in health-lines is increasing at a very rapid rate these latter days.

What is a Bee-Scout?

Some readers may wonder why such a question is asked, because they are familiar with the word, and have never heard it used with any other meaning than that of a bee going out in advance to select a place for the future home of a swarm. The dictionary confirms this view.

It appears, however, that in England the name is applied to those bees which are on the lookout against intruders, as described by a writer in the British Bee Journal in these words:

> There seems no reasonable doubt that the duties of the scouting bee are as clearly defined and deliberately assumed as are those of the sentinel, though the elusiveness of her movements, owing to the fact that they have to be performed on the wing, may lead to the notion that she is nothing more than a chance member of the community whose temper has become upset, and habits of industry in consequence temporarily diverted from their usual peaceful course. In spring and early summer it is true her numbers are insignificant, and her special duties can then scarcely be said to have been taken up in earnest; but as the season advances the ranks of the bee-scout become recruited, and their attitude towards supposed intruders more aggressive. This remark may not wholly apply to cases where undue irritation has been brought about by accident or awkward handling, but in a well-managed apiary it is interesting to note the strictly limited area within which the aggressive attentions of the bee-scout are observable. Her function is to circle around within a few yards of the hive, and, unless actually following up an attack, her threatening attitude is scarcely exhibited beyond the prescribed limits. To the writer it appears that the zone of the scout's greatest activity lies within a distance of perhaps from two to seven or eight yards of home, and what is more striking, she seems, as a rule, to pay little attention to any one standing close against the hive, as, for instance, in an act of manipulation.

It will be seen that a class of bees is spoken of entirely different from those called scout-bees in this country. Indeed, it is a question whether heretofore the bees spoken of by the British writer have ever been considered as a separate class; and yet he may be right in thus speaking of them. Any experienced bee-keeper will recall one or several cross bees following him persistently about the apiary, perhaps all day long. Are not such bees detailed specially for that duty? But it will hardly do to call them scout-bees, so long as that term is already in use for another purpose. Shall they be called *pickets?* or is there some better name?

Sense of Location in Bees.

This has attracted a good deal of attention. Some have thought them possessed of a special sense that allows them to return with unerring certainty from any point of the compass directly to their own home. In finding their home they are most assuredly not entirely guided by the appearance of that home itself, for if a hive in an apiary be removed ten feet from its location, the returning field-bees will never find it, although its appearance be exactly the same as before removal. C. Krah, in Praktischer Wegweiser, argues that there is no special sense in the case, that it is a matter of memory pure and simple. Observation and reflection help to establish this view.

Note the careful manner in which a bee marks its location when it takes its first flight, as also when it voluntarily changes location at swarming, or when changed a considerable distance to a new location. At first thought it might appear that it is merely noting the appearance of its hive, but its constantly widening circles favor the belief that it is taking an inventory of a wider circle of objects, with its hive as a central point. After the winter's confinement, or after a considerable confinement at any other time, a fresh marking takes place as if to refresh the memory. Then, after the marking is carefully done, no time is wasted in reconnoitering to find the right place on subsequent flights, but depending upon its memory for the appearance of surrounding objects, perhaps for a great distance in all directions, it goes in a bee-line direct to the central point of the objects previously noted.

Improvement of Stock.

Under this heading, in the American Bee-Keeper, with no comment unless it be the sub-head, "A New Idea as to Means of Facilitating this Desirable Result," appears the following in an article by G. B. Crum:

> I have combs built part way down and give these to queenless colonies to start dummy cells on the lower edge, which I use by putting in larvæ, changing them again in from 12 to 20 hours; that is, taking

out those first inserted and substituting a new batch. "Oh, that's nothing new," you say. Now hold your tongue and wait until I am through.

My cell-building colonies are broodless—composed of bees not one of which is under ten days old. You say, "Why go contrary to all orthodox rules?" Because young bees like "pap" better than old ones. To satisfy yourself upon this point, just give a frame of eggs to a colony with no bees under ten days old, and another to a colony which has just been deprived of all brood and eggs. You will find that the former are much better fed than the latter.

Now, for my plan of selecting queen mothers: I select a queen that has just begun laying, regardless of what she may prove afterwards, as to color, etc. I closely follow up this method from generation to generation, from April to October. Thus, it will be seen, it is possible to get ten generations in one year—40 generations in four years—which is about the extreme limit of a queen's life, which is used as a drone-mother. Now, observe that it is thus possible for a queen to be a half-sister to her fortieth grandmother. You inquire, "Well, what do you gain by all this?" Well, I gain a long stride ahead of Nature, and, I believe, a queen whose workers have few equals and no superiors.

This is interesting, if for nothing else, for its audacity in going square against all established precedent. Bees under ten days old are chosen to rear queen-cells because "young bees like 'pap' better than old ones." Are we to understand that "pap" is prepared by the older bees and fed to those under ten days old? Is there any proof for this new doctrine? Mr. Crum says that by taking queen-mothers at random, only so they are young, he gains a long stride ahead of Nature. One would be better satisfied to have something beyond the mere assertion that there is great gain. Is there any gain beyond that of rearing from young queens? and is that a gain at all?

Taking the Candying Notion Out of Honey.

H. G. Quirin gives, in Gleanings in Bee-Culture, an account of some experience in the matter a dozen of years ago. He says:

> "In June, or when the first white-clover honey came in, we extracted a gallon, which we wished to use for making queen-candy. As the honey was rather thin, we placed the jar on the reservoir of the kitchen stove, with the injunction that it was to stay there till we removed it. Well, it stayed there for perhaps two months, the temperature varying all the way from 75 to 150 degrees, or perhaps a little higher at times. This honey was kept for two years, and part of the time in winter, when it went as low as zero, but it never candied. At present we keep our honey in five or six 60-pound cans blocked up back of the kitchen stove for several weeks before bottling. We believe this will keep it from going to candy until the grocer sells it. We find alfalfa honey quite stubborn. You can melt this honey in the oven, and it's ready to sugar the next day or two."

This is interesting, not because new, but because it corroborates the view that honey kept for a sufficient length of time at a high temperature, whether it be comb or extracted, will remain free from granulating. Not only that, but comb honey thus treated will stand zero freezing without cracking across the face of the comb, as honey generally does.

If you have a garret up against the roof, where the heat is suffocating on warm days in summer, try putting some honey there, leaving it throughout the summer, and then see how much better it will stand the cold of the following winter.

A Peculiarity of Eucalyptus Trees.

At least of some of the characteristics of eucalyptus trees can not fail to impress those who see them for the first time. The leaves of the lower part of the tree differ in size and color from those on the rest of the tree. There is not merely a little difference, but the difference is striking. Neither is there a gradual shading from one kind to the other, but an abrupt change, so that one seeing a tree of the kind for the first time is likely to think some small bush with larger leaves is growing at the foot of the large tree.

Cold Water Introduction of Queens.

The Australian Bee-Bulletin says: "A Frenchman, in introducing queens, puts the caged queen in the hive. Next day he takes the cage (queen included), puts it in a cup of cold water, and then turns the wet queen loose. He says he never lost a queen in this way." However French may be the man who introduced that custom, he is none other than our own Adrian Getaz, down in Tennessee.

The Premiums we offer are all well worth working for. Look at them.

Miscellaneous Items

Clipping Queens has become quite the fashion in this country, but the British Bee Journal says it has never found favor in England.

* * *

Math. W. Krudwig, an Iowa bee-keeper, while working around his bees the past season, was stung on the tongue by a bee. His tongue swelled up terribly, and was unable to talk for several hours. He was obliged to seek medical aid to relieve the pain and swelling.

* * *

Mr. Wm. Ross, of Ventura Co., Calif., passed through Chicago recently on his way home, after spending a week or two in Canada, where he used to live before going to a sunnier clime. Mr. Ross is the bee-keeper who had a summer tent-cottage on Catalina Island. He helped make our short stay there pleasanter.

* * *

The Chicago-Northwestern Convention was held last Wednesday and Thursday as announced. It was a "great meeting"—so "they say." About 100 bee-keepers were in attendance, and from beginning to end it was one continuous stream of good bee-talk. We believe it will make one of the very best reports that was ever published. It was all taken in shorthand by and for the American Bee Journal. So look out for the report in these columns later on.

* * *

Secretary H. C. Morehouse, of the Colorado Bee-Keepers' Association, writing us Nov. 28, said this concerning their annual meeting held in Denver last month:

> "The meeting was the best one ever held in the name of the Colorado Association, and the subjects presented were of great interest to bee-keepers throughout the West. The spirit of absolute harmony prevailed at all of the sessions."

We expect to publish a report of the Colorado convention soon. It is always one of the best of the whole year. Those Colorado bee-keepers are great folks.

* * *

Little Miss Hope H. Able, of Northampton Co., Pa., wrote recently, and her letter appeared on page 746. Referring to it, she writes again:

> MY DEAR EDITOR:—I was glad to see my letter in the American Bee Journal, but very sorry to see that you had a mistake in it. You said we increased from 7 to 8 colonies. It should have been from 7 to 18 colonies.
>
> I am 9½ years old. From your friend,
>
> HOPE H. ABEL.

We are glad to make the correction, for increasing from 7 colonies to 8 is quite different from 7 to 18.

* * *

Mr. Gus Dittmer, who is a Wisconsin bee-supply dealer and comb foundation maker, thinks that in referring to the Weed process of sheeting wax, as we did on page 739, we may possibly have done him an injustice. We simply said that "the bulk of the comb foundation sold to-day is made by the Weed process," which "will not work adulterated wax." We understand that while Mr. Dittmer's process may be different, nothing but pure wax goes through his sheeting machines also.

Mr. Dittmer is an honorable manufacturer and dealer, as his increasing trade easily testifies.

* * *

Mr. H. H. Chase, a bee-keeper of Manistee Co., Mich., sent us the following clipping from a local newspaper, dated Nov. 23, which is interesting even if not "all about bees:"

> "H. H. Chase has recently found two mounds on the north side of Bear Lake from which he obtained two skeletons, a beveled stone instrument, two pieces of ancient pottery, about 30 bone beads, and a few clippings of black flint. One bone of the arm had evidently been broken and healed. The shape and size of the skulls varied, one having double teeth all around.
>
> "These specimens are unmistakably of a prehistoric race, as the manner of burial indicates, by an upright kneeling position facing the water and the west, and they have, in all probability, been buried from 500 to 1000 years. These findings, added to other tools, axes, arrowheads, etc., make a choice collection, which will doubtless find its way to a museum later."

Sketches of Beedomites

HOMER H. HYDE.

Homer H. Hyde, whose picture with that of his bride adorns the first page of this number of the American Bee Journal, was born in Dawsonville, Ga., May 7, 1881. At the age of three years, his father went to Texas, following his trade of a carpenter, and also farming for some years.

At the age of about 10 years, through his good mother's influence, his father bought his first colony of bees, and from that day to this, "Homer" has not ceased to have an active interest in bees, which seems to grow stronger as the years go by.

Mr. Hyde has read about all there is published on the subject of bees, taking all the apiarian papers regularly, besides spending a large part of his time the last ten years right in the apiary with the bees. The past season, however, he was kept pretty well closed in on account of the demands of the office-work, but he hopes to arrange matters so that another season he will be able to spend more time with the bees again.

Mr. Hyde secured his education in the common schools of Texas, and also took one course in Taylor University, at Waco, Tex. He was married June 18, 1903. His wife was born in Conway, Ark., Aug. 12, 1883. She is a lineal descendant of John Adams. Mrs. Hyde received her education in the high school of Floresville, Tex., and a little later was won "for better or for worse" by H. H. H. Mrs. Hyde is very much interested in her husband's work, and in the bee-industry, though it is said she is very much afraid of the bees themselves. However, Mr. Hyde thinks if she succeeds in holding the reins on him, she will have done her part. And that's so!

Both Mr. and Mrs. Hyde are members of the Missionary Baptist church, and are active in its services.

Mr. Hyde was one of the car-load of bee-keepers that crossed the continent recently to attend the Los Angeles convention of the National Bee-Keepers' Association, of which he is a member. We thus had opportunity to get acquainted with him. If all the other Texas bee-keepers are as energetic and enthusiastic as he is, we wouldn't object to forming the acquaintance of some more of them. We don't know what the middle initial "H." stands for in his name, but it might very appropriately be Homer *Hustler* Hyde.

Referring to three of the pictures shown on the first page, Mr. Hyde wrote us as follows:

Mr. York:—Enclosed are some partial views of two of our apiaries. In No. 3 you will notice that the apiary is situated in a grove of mesquite trees. However, this ground was a great mass of prickly pear and other growth, so that the open space is literally hewn out. In the lower part of the picture you will see some of the pear, showing its outline. The men in the apiary are helpers, and constitute our force, with the exception of myself. The men are, from left to right, O. P. Hyde, L. B. Wiseman (visitor), Wm. Sedding, Milton West, Emmett Hyde, and Chas. Wurth. We have 100 colonies of bees in this apiary.

No. 4 is a view of another yard taken some rods from the bees. This is taken to show the profusion of wild spring flowers that cover the pastures everywhere at that season of the year. In this yard we had neglected to use the scythe for about three weeks, and you observe the results. The shrubs in the picture are mesquites. We have 90 colonies in this yard.

No. 2 is a picture taken in our Holy-Land apiary, showing our men working with a full colony of pure-bloods without veil or smoke. These men are, from left to right, E. J. Carlton (foreman of apiaries), Emmett Hyde, and Chas. Wurth.

These three pictures were snapped by myself, and are among my first efforts in amateur photography.

We have about 1100 colonies of bees, located in 10 apiaries, from 1 to 9 miles from home. Each location will stand easily 200 colonies, and we expect to increase to that number at each yard. Our cold, late spring knocked us out on catclaw honey this year, giving us a frost on April 28, coming at just the time the catclaw was beginning to yield.

An average crop of honey for this locality is 100 pounds of bulk comb honey. We have the largest number of bees kept by any one company in the State. We are expansionists, and expect to increase our bees as fast as possible. Our methods of management will be given later on, when the writer has the time to write them up.

H. H. Hyde.

Convention Proceedings

THE LOS ANGELES CONVENTION.

Report of the Proceedings of the 34th Annual Meeting of the National Bee-Keepers' Association, Held at Los Angeles, Calif., Aug. 18, 19 and 20, 1903.

(Continued from page 775.)

The next on the program was a paper by Homer H. Hyde, of Texas, on the

PRODUCTION AND SALE OF BULK COMB HONEY.

A few years ago bulk comb was practically unknown, but to-day there is scarcely a bee-keeper in the United States that has not heard of it, and how it is produced. It is now the principal product of the southwestern Texas bee-keepers. Its production is rapidly gaining ground not only all over Texas, but is gaining a footing in Nebraska, Colorado, Utah and California.

Since the publication of my articles in the bee-papers, inquiries have come from all over the country, and many of them state that they have already commenced the production of bulk comb honey. The production of the article will soon be universal.

The demand from the consumers for this article is rapidly growing, and is keeping far ahead of its production, and to this fact the bee-keepers are rapidly catching on. There are many reasons why it is gaining a hold with both the consumer and the producer, especially the former. When he buys a can of bulk comb honey he feels sure that he is getting a pure sweet, just as the bees made it; he feels that he is getting full weight; and he knows he has bought it at a less price per pound than he could have bought section honey. Then he has his honey in a nice bucket where it can not break or lose out when cut in two; and when he has eaten out the honey he has a useful pail left.

These are some of the reasons why the consumer prefers bulk comb honey to section honey. I am talking of the majority of the people. Of course, there are the wealthy who will always buy a limited quantity of section honey because it is high in price, and has to them a fancy look.

Now, let me quote Editor Root's foot-note to one of my articles:

"In my southwestern trip of a year and a half ago, I was fully convinced that bulk honey, or chunk honey, was getting to be more and more in vogue, both among progressive bee-keepers and the consumers themselves. Still, I found some bee-keepers who thought it would be better to educate the consumer to the use of section honey, believing there would be more money in the production of such an article. But I must admit that Mr. Hyde has advanced some very strong arguments in favor of chunk honey; and why should we bee-keepers not cater to the various demands? One locality will use large quantties of candied extracted honey; another will use nothing but crystalline liquid extracted; still another, fancy comb honey; still others dark honey, almost as black as blackstrap itself. Cater to what the locality calls for."

Yes, friends, let's give people what they want, and if they want bulk comb honey give it to them. Simply produce some of the article and take it around to your customers and give them a choice of the two honeys—section or bulk comb honey—and your customers will soon all call for the latter. Now, gentlemen, if this can be done, why not do it? We are sure it is the most profitable, as all will admit.

Bulk comb honey is produced in either full bodies or shallow Ideal supers. If the former is used it is hardly practical to fasten in full sheets of foundation, as the frames can not be wired, because we expect to cut the honey out; but with the Ideal frames we can use full sheets if we so prefer. Ideal supers and frames are preferred generally because they are not so large, are not so heavy to handle, they are nearer the right amount of room to give a colony at one time, and they can be freed of bees much quicker than can full bodies. To free them of bees we simply smoke down between the frames well, and then pry the super loose and jounce it, when it will be found that most of the bees will fall out. They can then be stacked up and a hole left at the top, when, in two or three hours time, the last bee will have left the supers.

Then, again, the supers and frames are nice for extracted honey, should the bee-keeper in any event desire to use them, and, in fact, in putting up bulk comb honey it requires about one-third extracted honey with which to put the comb up.

In packing bulk comb we cut out the comb nicely and place it in the cans, and afterwards pour in extracted honey to cover the comb and to fill up the crevices, and, in this way, about one-third extracted honey goes in, and it must be remembered that this extracted honey goes in at the comb-honey price. It has been found both practical and profitable to produce both comb and extracted honey in the same apiary, and, in fact, on the same hives at the same time, for many have found that it pays them to have one super of combs on top of the regular brood-nest, so that the queen may fill it with brood before the honey-flow, if she likes, and when the flow comes these supers catch the first nectar, and as soon as the flow is on, and the bees have commenced to secrete wax, this super of combs is lifted and the empty frames of foundation placed between them and the brood, which is the most effectual way of baiting bees into the supers; and then it will be found that where colonies are so worked swarming is kept in check, if not entirely prevented, the queen is left in entire possession of the regular brood-nest, and by the time the flow is over the brood will have hatched from the shallow super of combs, and the bees will have filled it with extracted honey, and this is just what we will want in putting up our comb honey, as we have already shown that at least one-third the honey must be extracted with which to pack the comb. It has been demonstrated, time and again, that bees will store all the way from 50 percent to 100 percent more honey when worked for section honey, and many believe (the writer included) that where the bees are worked as outlined above, nearly, if not quite, as much bulk comb honey can be produced as could be produced of extracted honey alone, and especially does this hold good where the localities have fast flows of honey, in which a great amount of wax is always secreted whether there are any combs to build or not.

This year's experience confirms all the above, and more, and we are more than ever convinced of the advantages of producing bulk comb honey. In addition I will say that we would advise all to use full sheets of foundation in the supers at all times, and we more than ever recommend the Ideal, or 5⅜, super for the production of bulk comb honey.

We will now show the relative cost of bulk comb to section honey. When we buy bulk comb supers and frames we have bought them to use for years. When we buy sections they are for only one season's use, whether they be filled with honey or not. Then we have to have costly separators, followers, etc., that soon give out, to be replaced. When we go to ship we have to have costly glass-front shipping-cases, and these cases in turn packed in crates for shipment. When we pack section honey we have to take lots of time and patience to scrape the sections. When we pack bulk comb honey we buy cases of cans and cut the honey out into them. When we get ready to ship we have to pay a high rate of freight on section honey, and more, run the risk of having a good part of it badly damaged or destroyed all together. When we ship bulk comb we get a low extracted-honey rate, and have the assurance that it will go through as safely as if it were extracted honey. When we go to prepare supers for the harvest, all we have do to our bulk comb supers is to scrape the top-bars a little and fasten in the foundation; but with section honey we have to make up shipping-cases and sections, and spend a long time putting the foundation in just right.

Again, you will find that there is much less work attached to the production of bulk comb honey than there would be if producing section honey. I believe that the spring and summer work is reduced abount one-half.

For fastening in the foundation in the shallow frames, we use a machine that always puts the foundation in right and true, and securely. The machine works on the hot-plate principle, said plate being kept at the right temperature by a gasoline burner. This machine is also adapted for use in putting foundation in any kind or sized frame having the Langstroth length. However, the majority do not have these machines, but they can put the foundation on the top-bars with melted wax. Simply keep a can of wax hot, and then use a spoon with which to pour a small quantity along the edge of the foundation, which is first placed squarely in the center of the top-bar.

When the supers are put on, the bees go to work in the bulk comb supers at once, and in a big cluster, and thereby forgetting to swarm; but with section supers the bees have to be carefully baited and coaxed into the supers, and when they get there they are cut off into 24 or more small compartments, which they have to try to keep warm, and to get them sealed out to the wood we have to crowd the bees, and thereby losing honey. By crowding we lose equally as much honey as we do when the supers are first put on, by reason of the bees being slow to enter the sections. Just how much honey is lost by the bees being slow to enter the sections, how much is lost by crowding, and how much is lost by swarming, I am unable to say, but it is considerable.

You may take the items in the production of the two honeys from beginning to end, and there is not an item that is not in favor of bulk comb honey, except solely in the matter of price received; but, friends, where unbiased men have tried the production of the two honeys side by side, and carefully taken into consideration every factor, they have invariably found that they can make at least 60 percent more money producing bulk comb, and many have placed the percent much higher.

There is another fact: Not one of the men who once quit section honey has gone back to it. We were ourselves large section-honey producers several years ago, but have been converted, and have disposed of most of our section-honey supers, and to-day have a large pile of them awaiting a purchaser.

You may say, I have no trade or demand for bulk comb honey. I will say that all you have to do is to produce it and offer it for sale, and you will soon have a trade that nothing but bulk comb will satisfy. You may say, I will have to ship my honey, and, what then? There is no market for this new product. I will say, take your honey to the cities and offer it yourself, and you will find a ready and appreciative market, and one that will next year demand more bulk comb, and the grocerymen will have to order their supplies from you. There is no question but that a market can be found. The bee-keepers of Texas have found a market for more than they can produce, and I take it that the bee-men of other States have the same intelligence and the same get-up-and-get that the Texas bee-men have.

The packages used in putting up in this locality are now most largely 3, 6, and 12 pound tin friction-top pails that are put up in crates holding 10 of the 12-pound cans, 10 of the 6-pound cans, and 20 of the 3-pound cans. There is also some demand for bulk comb in 60 pound cans, two in a case, the cans having 8-inch screw-tops. These are sometimes ordered where the buyer desires to put the honey into glass packages for a fancy trade.

The question has been asked me, "How about it when the extracted part candies?" Well, you will either have to dispose of the honey before it candies, or teach your customers that there is no finer dish on earth than a fine grade of candied bulk comb honey. Our Texas trade does not object to candied honey in the least, as it has learned that honey is really better in its candied state. I fully realize, however, that this propensity to candy will be one of the drawbacks to its production in the North, and so would advise all to go slowly until they have a ready market for it before cold weather, or until they can teach their customers that it is really better candied.

We have lately "caught onto" a plan to prevent the candying of bulk comb honey, and that is to put up the comb in extracted honey that has been well heated, and seal up the cans with paraffine while the honey is yet hot, and we believe that it will not granulate under one year, and that is the opinion of Mr. Boyden, also. However, Mr. Boardman, of Ohio, has been drawn to the bulk comb idea, and has gone to work to find a way to keep it, and keep it just as taken from the bees. We hope he will be successful.

Some have asked me where the cans can be secured, and I will say that all are made by the American Can Co., but call for the cans made for their Texas honey-can trade. Now, in lieu of the regular cans you may use for the home trade, lard-pails, or Mason jars, which are all right, and perhaps better, as the cans are made primarily for the shipping trade.

I wish to refute the statement made that the production of bulk comb honey was the old-fogy way of honey-production. I assure you that it is not, and that it requires as much skill and as fine a grade of honey as it does for section honey. I also assure you that the consumers are behind this move, and that it is only a question of time when the production of section honey will have almost disappeared.

Let me quote Editor Root as follows:

"Chunk comb honey is somewhat in disrepute, it is true, from the fact that it used to represent the product of the old box-hive, and was a mixture of everything—old combs, dead bees, pollen, propolis, wax-worms, light and dark honey—in fact, a little of everything that may come from an old-fashioned box-hive. Bulk comb honey, as Mr. Hyde would have us call it, represents an entirely different product—the very best table honey, being a mixture of the best extracted and the whitest comb honey. Some of my chance acquaintances have spoken in glowing terms of the 'real honey' of 'father's table,' as if that in sections were manufactured. To argue with them that the latter is just as pure is almost a hopeless task. Sometimes I think we might just as well satisfy their whims by giving them what they will accept, and I do not know of anything very much nicer than clean, sparkling extracted honey, of good quality, having chunks of delicious comb honey mixed in it of the same grade and quality. When such goods can be displayed to the consumer, and he *knows* it is all honey, he very likely would take it in preference to either comb or extracted separate.

"A correspondent near Oakland, Calif., once went out and peddled some of his very white comb honey in tall sections among the wealthy class. They would have none of it. Some of them were from 'Down East.' What did he do? He went home and cut that honey out of the sections, and mixed in it a nice grade of extracted, and sent another man around with the goods. The same people accepted that at once. Why, that was honey, just like that used years ago on 'father's table.' Of course, they could easily sample it—something they could not do with the pearly-white comb honey in sections; and the mere taste of it was enough to assure them that it was all right."

Now, friends, I have told you about all that I can think of on the subject, and if there is anything further you would like to know, kindly ask me, and I will answer to the best of my ability. H. H. HYDE.

Mr. Dadant could not be present at this session, and had no paper in response, but authorized Secretary York to state for him that Mr. Hyde's paper had been read by him, and that he agreed most wholly with what Mr. Hyde had said; that he had been very busy, had not had time to reply, and that he was almost fully in sympathy with Mr. Hyde's views.

W. R. Woods—In shipping with these cans, do you find any difficulty with the covers flying off? In case the goods should be shipped bottom side up, what holds the cover on?

Mr. Hyde—This is known as the "friction top" can. It goes on tight; the covers of the cases go squarely on top of these, and upside down, or any other way, the shipment goes through in perfect order. We have shipped something like 5000 pounds of honey in 3, 6, and 12 pound cans, and have not had a single complaint of honey not arriving in perfect order.

L. S. Emerson—I would like to ask if you use a queen-excluder, and where?

Mr. Hyde—We have not used a queen-excluder for the last five or six years, from the fact that we do not have on the comb-honey supers until we have the best honey-flow. When the main harvest comes, the flow is so rapid the queen has no opportunity to lay in the cells.

Mr. Carter—I have had 25 or 30 years' experience. I wish to say I am not a member of the Association, have not been an extensive bee-handler, yet I have had experience since I was about 16 years old. Some 25 or 30 years ago I took a notion I would like to get a few colonies of bees, and the next year I found myself with about 15 or 20, and one of the best yields of honey I ever witnessed. It came abundantly. I had no extractor, and hardly knew how to handle my honey. At that time foundation was introduced. I put in the foundation, for, as the gentleman indicated, they did not have time to build their comb, and they just filled the foundation in two or three days, the whole of the super. I used no section frames. Then the question was, What to do with my honey? I bought what are called butter-buckets in the East. We had nice, clean, wooden butter-buckets which I filled with the comb honey, and put extracted honey in to fill the spaces; then put the cover on tight, and there was a bail to handle it. I sold the honey at the highest price for comb honey. It went like hot-cakes. It was something new. Every one would say, "How beautiful!" The comb honey was quite level with the top of the bucket. Since I came to California I have tried to start in the chunk honey business again, but found it was difficult to get comb, and yet I have gotten some, and have put that into little buckets. You can put your business card on the pail, and it is called "White Mountain Chunk Honey." It is beautiful white honey, filled even full. In repard to shipping, you can have (I am telling you from theory rather than practice) tight covers fit so well there is no leak to it, and on top of that another cover. I sell sometimes a little honey to my neighbors; I do not ship at all. But as soon as a lady looks into the bucket, she says, "I want one of these." It seems to take. She knows when she gets a section of comb honey that she gets 12 to 14 ounces. They do not weigh over 14 ounces at any time, and when she has taken off the wood and everything else, she gets 12 ounces. When short weight, as they frequently are, she gets only 10 ounces. But in this way she gets just as beautiful honey as in sections, and gets full weight. The bulk honey sells two to one with me.

A. I. Root—25 or 30 years ago there was a big trade on comb honey put up in glass jars—not in Mason jars, but more largely in tumblers. A good deal of it was glucose, and that threw it into disrepute. I trust people have forgotten about glass-tumbler honey with a little piece of comb and a good deal of glucose in it. There was a law against it passed in New York State, I think. They then put up comb honey—a small piece—and surrounding this was a liquid they called "corn syrup," and when they were taken to task about it they said the honey granulated. The whole matter got into disrepute. I remember distinctly, as much as 30 or 35 years ago, buying a stock of honey in barrels; I took it home and put it in Mason jars. I could not get enough of it. But when the cold weather came on, and it began to candy, that set us back. Last February, I think, while I was in Cuba, Mr. W. W. Somerford had quite a fever for bulk comb honey. He was buying 5-gallon cans. He told me he could get more for his honey in 5-gallon cans than for his finest section honey, and he was preparing to fill up his cans with this honey. I did not find out how it turned out, but, since then I find, for some reason or other, his market had "let up." He was doing a "land office" business there last February. There was no "corn syrup" about that.

Emerson T. Abbott—I wanted to ask Mr. Hyde in regard to honey graining in Texas. In our country it grains. It seems to me, in our climate, it would grain put up in that way.

Mr. Hyde—We do not do anything about that in the spring and summer. It does not grain until winter. However, honey that we put up during the fall, that we do not expect will be immediately consumed, we heat the extracted honey and seal a large amount with sealing wax, and it keeps all winter.

(Continued next week.)

Contributed Articles

"Getting Both Increase and Honey."

BY W. W. M'NEAL.

WRITING from Knox Co., Ills., August 8, on page 600, Mr. J. E. Johnson tells of his success at getting both increase and honey. He says that he began the season with 12 weak colonies in a starving condition, but by judicious feeding in early spring he increased them, by natural swarming, to 50 strong colonies, secured 1200 pounds of comb honey, 200 pounds of extracted, and—oh, my! there were nearly 1000 pounds more that would soon have to come off the hives! Verily, truth is sometimes stranger than fiction, and to write those figures, even in quotations, makes me feel as if my pen was taking a sheer on me.

Allowing that his bees finished only 800 pounds of the 1000 pound, this would give a total of 2200 pounds, or an average of 183⅓ pounds to the colony, spring count, previous to the date of his letter. Judging from what he says in the 4th paragraph, we are led to infer that swarming did not begin earlier than June 15, and possibly not so soon as that. This being the case, then practically none of the young queens were old enough to gather honey prior to the date of Aug. 8. Not being supplied with ready-drawn combs, the young queens were, of course, confined to a very limited amount of brood-comb for several days after they became fertile; hence we must base our figures on the count of 12 colonies for the number of pounds of surplus honey obtained.

But since this great amount of honey—2200 pounds—represented the joint efforts of the 12 colonies, the increase of 38 swarms was from only 11 colonies! One colony did not swarm because he took so much brood from it that it had no desire to swarm. This one filled 90 sections, so he thinks, and at the time he was writing they had 90 more nearly finished, which was 30 sections better than the best work of any of the swarms. A similar treatment of them all would have made the average only 3½ pounds less of honey, notwithstanding that the increase from that one colony was made much earlier in the season when it could ill afford to spare the brood and bees. The nuclei, we are told, built up to normal in strength.

Now, the question is: Why does Mr. Johnson lay special stress on his manipulation of the 11 colonies, with all the attendant vexations of such rampant natural swarming, when he could have avoided all that, and accomplished practically as much in increase of colonies and honey obtained by managing all of them as he did that one colony? We have it from his own statements that the method of artificial increase was really superior, for it gave in addition, virtually, freedom from the apiary.

Had Mr. Johnson practiced this method on the 12 colonies, using full sheets of foundation in the brood-chamber of the old colonies, in the place of the combs removed, and then given wired frames with starters to all nuclei, I think he would have found it to be the better way, at a very slight additional expense. Moreover, all his colonies would have been in far better condition at the close of the season as regards worker-comb. The probabilities are that much of the comb the swarms built in the brood-chamber of the new hives was drone-comb, which is, at best, a very undesirable state of affairs.

Another point in this connection was his manipulation of those extracting supers with two-inch strips of foundation in the frames. According to the rule of all good bees, and bad bees, I have had anything to do with, this would have resulted disastrously, for what comb was built beneath the foundation would have been drone-size of cell. The queen would hasten up there and consume valuable time laying drone-eggs, which become a burden to the colony as soon as hatched, and cast a shadow across the glittering rays of success.

For the purpose of enlarging the brood-chamber and promoting a rapid numerical growth of the colony, I would have advised the use of a case of combs; and, as second best, full sheets of foundation in the frames. The extracting case then materially enlarges the brood-chamber at a time of year when its occupancy by the queen results in a larger force of workers for the harvest. Instead of putting the first comb-honey super on top of the extracting super, it is better, in most cases, to place it between that and the brood-chamber proper. The bees will then quickly begin work in the sections, thus overcoming the tendency to flush the brood-chamber with honey. Large numbers of bees that otherwise would remain below to crowd upon the brood-combs are gotten out of the way in the best manner possible. The reverse of this would largely be the result when managed as Mr. Johnson did it. Besides, young bees will not enter an empty extracting super practically any sooner than they will a comb-honey super with fences; and when the combs are finished they are unfit for the purpose named. The honey they contain must be extracted and sold for less than if the same had been stored in sections. It would be, on the whole, a less profitable way of managing an apiary.

I will here state that a queen-excluding honey-board is really indispensable whenever desired to leave the extracting super on the hive until the brood hatches from it. The old queen must be kept in the lower story; but the honey-board should be placed between the extracting super and the section super, and not immediately above the brood-chamber, as in the usual way. It does not then interfere with entrance into the first super, but it does have a tendency to discourage the storing of honey in the upper one. When the extracting case is thus used, and left only long enough to start the bees to work in the sections, the honey-board is not absolutely necessary. But if the case remained on the hive, and the queen were to pass through the comb-honey super and again enter it, she would probably stay there until queen-cells were capped below, and swarming resulted. In 10-frame hives there is very little danger of the queen going above; and the real advantage of the honey-board in either an 8-frame or 10-frame hive is to prevent such an unhappy occurrence as the killing of the mother queen by the virgin reared among the isolated combs of the extracting super. The presence of queen-cells in the super will not cause swarming under the same pressure, and a virgin queen will often be allowed to emerge from her cell and destroy the laying queen at a time of year when her loss would mean the ruination of the colony for surplus honey.

Mr. Johnson's manner of giving only one super to prime swarms that were large enough to fill the brood-chamber and super "chock-full," is simply unique in its being a dangerous plan to follow. The orthodox way of treating swarms, is to give an abundance of room at time of hiving them, and then contracting "in two or three days" to the actual needs of the bees, or what the floral conditions seem to justify. The swarm issues, as a rule, because of an overcrowded and heated condition of the brood-chamber, and if the same conditions prevail in the new hive while the swarming fever is at its highest, the swarm is almost certain to decamp.

We must, however, concede to our friend the honor of securing a larger crop of honey, according to the figures, than that of our own this year. But we think that when he has given the two methods—natural and artificial increase—a more extended trial, he will welcome the latter with its many advantages, and also see that his success in the present case was largely in spite of his efforts at hive-manipulation.

Scioto Co., Ohio.

The Movable-Frame Hive vs. the Box-Hive.

BY DR. C. C. MILLER.

With the permission of the Editor, I would like the opportunity of a little talk with "A Bee-Keeper in Virginia," whose communication appears on page 750.

I confess, my Virginia friend, that I am not often so much interested as in the reading of your letter, arising, perhaps, more than anything else from your ingenious way of putting things. If your bill of particulars were to be laid before a farmer, and you should say to him, "There's the bill; now you can take your choice, undergo an expenditure of $338.18 for four years, or keep on with box-hives without any expense, and still get 50 pounds of surplus from each colony," I think he would hardly be blamed for shying at the expense. But is it put before him in that shape? Honest Indian, did you have it before you in that way when you decided to change from box-hives? Possibly if it had been put before you in just that light, even *you* might have hesitated. But did you think of it at all in just that way? Does any farmer? If he doesn't, then that's not what glues him to his box-hives.

But why did you stop at four years, or at 50 colonies? He might be so unfortunate as to be like some others, and run up to 500 or 1000 colonies. If only 500, then your annual estimate of $85 would become $850. If the $338.18 didn't scare him out, perhaps the bigger figures might.

Are all the items given to be fairly charged to box-hives? A man could get along without a smoker—some do—even if his bees were in movable-frame hives. Indeed, most of the items you have given can be dispensed with by the man who has movable-frame hives, and I've known more than one farmer who kept his bees in such hives and yet made no outlay different from what he had formerly done with box-hives—although I agree that he might as well have stuck to the box-hives if he had no intention of making use of the advantages offered by the better hives. The fact is, that your items are not necessarily attendant upon the adoption of movable-comb hives. A man may change from box-hives with no other expense except that for hives, and his further expenses—which may be graduated all the way from very little to the fullest expense called for by the up-to-datest sort of bee-keeping—must be charged, not to movable-comb hives, but to improved methods of bee-keeping.

You say, "You will understand that I expect it to pay *me* well (notwithstanding the expense), or I should not have entered on the necessary expense for the next 3 years. But most users of the box-hives couldn't, and wouldn't, stand the expense, even if they knew that they would double or treble their honey crop." That may be true in your locality; others may not be as bright as you in looking ahead, but, take the country at large, and farmers, perhaps especially bee-keeping farmers, are an intelligent lot, and would not hesitate at an expense that would double or treble their income.

Your suggestion that they would so hesitate, reminds me of the story of the old farmer in Pennsylvania (I do not vouch for the truth of the story, for I am a Pennsylvanian by birth, and have no little respect for the shrewdness of some of those old Germans). Oil was discovered upon the old gentleman's land, and a speculator visited him promptly to buy the land, offering him $25.00 an acre for it. The answer was, "Why, dot land—I pay $50.00 acre for it, and it wort' more now." Then the speculator made a graphic picture of the possibilities in that oil-well. Other wells had yielded so and so, and the prospect was that this well would exceed any previous record—a hundred thousand barrels, costing a dollar each, would be wanted in a short time to contain the oil—was the farmer willing to stand the expense? "A hunnert tousand dollar! mine cracious! no; I not got so mooch money in de world; dot oil-well break me all up; you can have dot land for twenty-five dollars; dot was better as to pay hunnert tousand dollar ven I don't got hunnert tousand dollar."

Perhaps the best proof that the thought of expense does not keep farmers from adopting movable-comb hives is the fact that it has not kept them from it. Thousands of farmers are using the best hives, and in many, if not most, localities box-hives have entirely disappeared. Very likely the chief reason that some in this country are still using box-hives, arises from the fact that they are not yet informed as to the advantages of any other than box-hives.

I still must thank you for your interesting bit of reading, and hope we may have more from your pen.

McHenry Co., Ill.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Putting Back Supers After Extracting.

Mr. Dadant's article, with the above caption, appeals to my interest because I have this year had the experience of J. S. Haag paralleled in my own apiary. The bees refused to clean out the extracted-combs, sealed over empty cells, and, as pointed out by Mr. Dadant, they occupied these supers sometimes, as it seemed, in full force.

Mr. Dadant advises the use of the enamel cloth between stories, or the perforated zinc. As it happened, I had some 10-frame hives covered with the enamel cloths, and the 8-frame hives either had, or had not, perforated zinc between the stories. The zinc seemed to make little difference about their occupying the upper story, and in at least one case I know that the queen was above the zinc after laying had ceased.

The 10-frame hives had their cloths because I did not at first think of giving them frames to clean, thinking they had less need than the 8-frame hives. However, I did, in two cases, give them combs, and in both they made a thorough clean, and *they were the only ones that did.*

In my case, the extracting and *putting back* was after the harvest was over, for that ceased suddenly this fall with a hard freeze about the middle of September.

Now, I did what Mr. Dadant would not under any consideration do—I gave the bees the combs to clean in the *open air.*

It is some years since I got a kink from R. C. Aikin, in the Bee Journal, in regard to open-air feeding. Up till that time I had considered it something to be deprecated entirely, but after he told *how to feed,* I find it the most practicable way of giving a general feed. The main thing is, when you are feeding, give plenty, and arrange so that all the bees can have easy access. I have never found it to lead to robbing.

Now, it is but a few days since I gave the bees a number of combs to clean up. On no consideration would I like to store them away just as they come from the extractor. Apart from the danger of souring the next crop, they are mussy and disagreeable to handle. As a rule, my bees clean them up nicely in the upper stories, and that is the way I prefer to have it done. They mend any that may have been broken, and they are so clean that it is a pleasure to store them away.

This year, as I have said, things were different. But we have some warm days here, even at this ssason of the year. On one of these I took a dozen or more of combs fresh from the extractor, and put them out-of-doors where the bees soon found them, and while they were pleasantly engaged with these I went to the hives for more—the ones they had refused to clean.

There is this to be said about an open-air feed—it puts the bees in a good humor, and any manipulations that have to be made with them are much more easily accomplished than when there is nothing of the kind going on.

Going to a hive, I had to take off the upper story with its combs full of bees, remove the excluder, put back the upper hive-body, shake the bees from the combs, and put these out with the others being cleaned up. Putting them out that way I did not need to be particular to shake off every bee as I otherwise would. Then, that hive is ready for its cloth, quilt and cushion, which I will admit it should have had earlier. Repeat the process until you think there is enough, and, take my word for it, the clean-up will surprise you.

There is much of human nature about a bee. Those combs, while in the hive, were regarded as a *possession,* but when out in the open they recognize the fact that it is a free-for-all scramble, and that those that work the hardest will get the most.

And a bee can not resist a display of honey, no matter how well its hive is stocked with that article—even as children with money in their pockets will scramble for pennies at a Fourth of July shower, or a Rockefeller pile up the millions, "for the good of the oil business." It's nature.

Custer Co., Nebr., Nov. 12. Mrs. A. L. Amos.

Your experience tallies with ours. There is no way in which you can feel so perfectly sure that the work of cleaning combs will be thoroughly done as by letting the bees have access to them outside their hives, so they feel that they are getting an accession to their wealth.

Where they will do the work properly on the hives, of course that is much the better way.

Your 10-frame colonies made better work than the colonies in smaller hives, quite possibly for the reason that they had more vacant space in the brood-chamber.

You say that feeding in the open air puts bees in a good humor. That's true, while the feed lasts, but when the supply stops, look out!

The danger of starting robbing by feeding in the open air is one that should be considered, but, really, is it as serious as sometimes represented? Is it true that a bee once guilty of robbing never returns to an honest life afterwards? It is true that when bees are fed in the open air they will try to force an entrance into cracks of hives all over the apiary as soon as the supply ceases, but did you never see exactly the same state of affairs when there was a sudden stop of the flow of nectar in the fields? Repeated opportunities for observation on this point seem to show that there is no more danger of robbing after out-door feeding stops than there is after the stoppage of the natural flow.

Mr. Dadant wisely calls attention to the danger of having combs torn to pieces by the bees in their eagerness to get at the exposed sweets, especially if combs are new and tender, and you meet the case by giving enough for all and having it easy of access. That's the plan of the late B. Taylor, and is all right *when you can do so.* But sometimes you do not have enough for all, and then you must take a directly opposite course—in place of the Taylor plan using the Miller plan, and instead of making the honey to be emptied easy of access, making it so difficult of access that there will not be enough bees crowding upon one single spot to tear the combs. This is accomplished by piling the combs in supers or hive-bodies and leaving an entrance only large enough for a single bee—perhaps more than one entrance if there are enough combs With this plan there is less danger of robbing, but it requires more time, and the combs should be left until the bees cease giving them attention.

Amerikanische Bienenzucht, by Hans Buschbauer, is a bee-keeper's handbook of 138 pages, which is just what our German friends will want. It is fully illustrated, and neatly bound in cloth. Price, postpaid, $1.00; or with the American Bee Journal one year—both for $1.75. Address all orders to this office.

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

EXTRACTING COMBS IN THE FALL.

I hardly think Mr. Dadant gets entirely to the bottom of the difficulties pertaining to daubed combs after extracting in the fall. Part of the trouble, I am convinced, lies in the fact that a portion of the bees have come to consider themselves as belonging upstairs to such an extent that they are not willing to stay below. As a natural result of this, they don't want all the honey carried away. Worth trying if they wouldn't bring up some to put in a set of perfectly dry combs. I first noticed this fall the following interesting fact: Where the super-combs are mostly drone, with a few of worker size among them, they take the honey out of the drone-comb and put it into the worker-comb. The latter can then be taken out and put through the extractor. Page 663.

PROPER TEMPERATURE FOR QUEEN-LARVÆ.

A. C. F. Bartz clearly shows a possibility of getting a tender and minute queen-larvæ soused into a bath a good many degrees too cold. Surely don't do the little thing any particular good, whether or not the harm extends to turning out a poor queen. Right, that comb and all it contains is a little hard and slow to warm up when once it gets cold. Wouldn't a carrying-box carefully made to warm by a lamp be about the proper thing for such operations on cold days? Just give a rest to "Unfold thy *bosom*, faithful tomb"—or say faithful imbecile asylum. If I'm right, the surfaces of our bodies are not quite warm enough anyhow on such occasions; and anything tucked under our clothes to get heat on a cold, windy time is in the position of being inadequately warmed on one side and decidedly cooled on the other side. Page 663.

DIFFERENCE IN SIZE OF BEES.

Taking the exact weight of two samples of bees in exactly similar conditions, is there ever so much difference from normal as 25 percent? I rather doubt it. We often feel inclined to say so at a casual glance—"These bees are a great deal smaller, or bigger, than mine." Usually a case of extreme contraction or distension, and not much else. Page 664.

HOW USE A BINGHAM KNIFE—FOOL QUESTION.

The problem, which side of the Bingham knife to hold next the comb, rather stirred me up. Which end of a spoon would you stick in your mouth? You can put in either one—and you *can't* use the wrong side of a Bingham, except on small combs and around the edges. Handle is set off on the off side when the knife is made. Next we shall be discussing whether to drive the nail with the wood or the iron of the hammer—and whether to remove the lid of the honey-pail or punch a hole through the bottom. Isn't it sometimes justifiable to return a pleasant smile and say, That comes pretty near being a "fool question?" Too great consideration for the great F. Q. gives the disagreeable impression that the Journal itself must be set to the key of F. Page 666.

HOW TO USE A BEE-TENT.

On page 679 we read: "Bees always attack your tent from the side where the wind blows." Then follows the very proper hint to do our going out and in on the other side. My guess is, that the meaning intended there is the opposite from the one we would first take from that wording. Through a tent which stands in the wind considerable air is drifting, and carrying the smell of honey out on the lee side. I should expect bees to besiege where the good smell came out.

PERHAPS THEY WERE SOLITARY BEES.

I wonder if "Virginia" was not mistaken about the insects he saw entering his hives being yellow-jackets. There are, I believe, solitary bees that enter hives mainly to lay eggs, and have their young reared in cuckoo fashion —developed, born and bred to the sly art of getting past the guards, there is less wonder that they succeed. I never heard of there being enough of them to accomplish any great harm. Page 682.

HOW CAN THE BLIND LEAD THE BLIND?

A cry to me for help, eh? Another conspicuous case of seeking help in the wrong place, and ignoring the right one. If Mr. Beverlin will look on page 680, he will find a most gracious offer of help—quite adequate for the cure of single-blessedness bread and the resulting wild mathematics. Page 685.

THE TELEPHONE IN SWARMING TIME.

Yes, Yon Yonson, those new rural 'phones, to call us away in swarming-time, to hive other people's bees while our own go to the woods, we shall long for a 'phone so improved as to get out of order in swarming-time. Page 687.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Keeping Brood-Combs.

On page 585, you advise me to unite my bees in the spring. You will please inform me what to do with the hives (from which I take the bees) containing brood-combs partially filled with honey and larvæ? By the time I am ready for them for swarms they are ruined by the moth.

Tennessee.

Answer.—For fear some one may misunderstand, let me preface my answer by saying that in general spring is not so good a time to unite as fall, for in general bees are united because colonies are too weak, and it is better to unite them in the fall for the sake of better wintering. But when normal colonies are to be united merely because the owner desires to reduce the number, then spring is the best time; because if the uniting is done in the fall some colonies may die in wintering, and the number of colonies thus become less than desired.

The best thing to do with the combs depends somewhat on circumstances. Perhaps this will do: When you unite, let the united colony have the two stories and all the combs of the two colonies united, and leave them thus till about time to begin surplus work, when you will take away one story and half the combs, leaving those containing most brood. If swarming begins with you about the same time as the harvest, that will leave only a short time for the combs to be kept, and perhaps they would need no attention till needed for swarms. If, however, you thought it necassary, you could pile them up and treat them with bisulphide of carbon. If working for extracted honey, there would be no need to take the combs from the bees at all.

If anything in your conditions make my answer inapplicable, give me the conditions and I'll try again.

By way of postscript, it may be well to add that at the time of taking away the combs it may happen that there may be so much brood that you will be compelled to take away combs containing more or less brood. In that case, after giving brood to any colony which has not brood in all its combs, pile up the brood on one or more colonies five or six stories high, having a queen-excluder over the first story. Such a colony is not likely to swarm, and by the time you have used the extra stories for swarms you will have a powerful colony for field-work.

Best Hive—Hybrid Bees—Foul Brood.

Last spring I commenced my first experience in bee-keeping with one colony of black bees. They were in an 8-frame hive, frames being 16½ inches by 11 inches, with ⅞-inch top-bar. They gave me 2 swarms this season, the first storing 12 pounds of surplus honey. The swarms are in hives of the same size. I wish to produce both comb and extracted honey, but mostly comb, as that is in greater demand here. I do not know whether to adopt a hive with a more shallow frame or not. It is better to have a deep frame for winter, I suppose.

1. What hive would you adopt, *i. e.*, a frame of what depth, and how many frames to a hive? I want to adopt a

good hive for wintering and surplus honey, and then "stick to it." Perhaps the one I have is all right.

2. What do you think of the long-tongued or red clover queens? I have seen them advertised so much.

3. Is there any danger of getting foul brood in one's apiary by sending away for queens?

4. May two kinds of bees be kept in the same apiary for 2 or 3 years without producing hybrids?

5. If so, how?

6. Are hybrid bees usually crosser than others?

7. When foul brood is found in an apiary where it has never before been known, what usually causes it? Is it carried by the bees from places where the disease is raging?

8. Some one who wrote for the American Bee Journal a few years ago, claimed that foul brood is caused by taking too much honey from the bees and then feeding sugar syrup. Is this true?

9. Is foul brood more prevalent among some races of bees than others?

10. If so, what race seems affected most?

NEW YORK.

ANSWERS.—1. Your hive is excellent for wintering, but for comb honey it is doubtful that you can get best results with so deep a frame. Some think that even 9⅛ is too deep. You ask what I would adopt. I'll tell you what I have adopted. I do not assume to know what is best in everything, but with the light I now have I am using the 8-frame hive with outside measure of frame the common size, 17⅝x9⅛, and find it works well for comb honey. It will also do well for extracted honey, although a larger hive would be better. Indeed, unless you intend to give close attention to your bees, a 10-frame hive would be better even for comb honey.

2. I think there is an advantage, and there may be a very great advantage in long tongues. In actual practice, however, I have come to doubt whether it is still worth while to pay any attention to the length of the tongues. Breed from the stock that gives best results. Very likely that may in most cases give long tongues, but whether tongues are long or short, we want the bees that will get the most honey.

3. Not much; I don't think many men would be dishonest enough to send out queens where there was any danger of sending foul brood as an accompaniment. As a matter of safety, however, it is not a bad thing to burn cage, bees and all, saving only the queen.

4 and 5. The thing is not practicable.

6. Yes, but not always.

7. Yes, it is carried in the honey stolen from diseased colonies.

8. Foul brood is due to the presence of the microbe bacillus alvei; neither spores nor bacilli of this kind are in sugar.

9 and 10. In Australia they say that the disease is more troublesome among black bees than Italians.

Wired Combs from Starters—Unsealed Sections—Bee-Sheds—Other Questions.

1. In hiving a swarm with only starters in frames, can the frames be wired so that the completed combs will be as strong and straight as if full sheets wired were used at the start?

2. Is there any way of getting unsealed honey out of sections without using an extractor, and without injurying the combs? And can unsealed honey be left in the sections without spoiling till spring?

3. How soon after the first swarm has issued should the young queen in the parent hive have her wings clipped? or in other words, how soon after the first swarm issues is the young queen fertilized?

4. How soon after a first swarm has left should the parent hive be given a super with sections? (I take the super that was on the parent hive and put it on the swarm at once.)

5. Will it be disadvantageous having sheds over the hives? Sheds are 5 feet high in front and 6 feet high in the rear. The temperature goes as high as 100 degrees in the shade here. I have little or no shade in the apiary.

6. What is the length of the main honey-flow, ordinarily, in central Virginia?

7. Could any of the eucalyptus trees be planted satisfactorily in central Virginia? The temperature occasionally goes below zero here.

8. Would it pay, not only for honey but for gentleness, too, to *insist* on having all pure Italians in an apriary of 50 colonies, by killing all hybrid queens as soon as discovered, and replacing immediately with tested Italians? There are very few either wild or domesticated black bees in the vicinity. (I rather expect you will say, "Decidedly not," to this question, as you seem to think very highly of good hybrids.)

9. Has Virginia any bee-inspector?

10. Does it matter how soon in the spring supers with full sheets of foundation are put on strong colonies?

11. Is it not better to put them on a little too soon than a little late?

12. When absolutely no more increase is desired, would the following plan be likely to succeed? Queens are all clipped. Return first swarm after catching clipped queen. Put clipped queen in safe place for an hour or two. Open the hive and kill the young queen, and destroy all cells and queens about to hatch, then give them the clipped queen back again. Destroy all drones in the swarm to allow more room for the workers. Watch the colony and destroy all cells as fast as they appear. VIRGINIA.

ANSWERS.—1. No; you can not be sure that the bees will build the septum directly on the wire.

2. No, unless it be to let the bees empty it. Generally, honey unsealed in sections will be granulated by spring, but if kept in a place sufficiently hot it will keep.

3. A queen may be clipped as soon as she lays, no matter when fertilized. The young queen may lay 16 days or more after issuing of prime swarm. In practice, it is well not to look till three weeks after swarming.

4. As soon as strong enough, which may be in a few days, and may not be at all. Generally, it is well to throw all the flying force into the swarm a week after swarming, in which case not much super-work can be expected from the mother colony for some time, if at all.

5. Sheds would probably be all right if not closed too much when hot.

6. I don't know. Perhaps the best way to get an answer from some one who knows is for me to guess, so I'll guess that the average length of the main flow is five weeks.

7. Doubtful, but it might be worth while to try.

8. "Decidedly not." Other things being equal, I'd rather have pure stock, but I would not secure it "by killing all hybrid queens as soon as discovered," unless there was already a great preponderance of pure blood. I'd favor the continuance of those which showed the best performance, and you are likely to find these among mixed as well as pure bloods.

9. I think not.

10. Yes; if put on too early there is a waste of heat at a time when heat is important.

11. Emphatically, yes. A little too early is just right.

12. No.

Our Wood Binder (or Holder) is made to take all the copies of the American Bee Journal for a year. It is sent by mail for 20 cents. Full directions accompany. The Bee Journals can be inserted as soon as they are received, and thus preserved for future reference. Upon receipt of $1.00 for your Bee Journal subscription *a full year in advance*, we will mail you a Wood Binder free—if you will mention it.

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Honey as a Health-Food is the name of a 16-page leaflet (3½x6 inches) which is designed to help increase the demand and sale of honey. The first part is devoted to a consideration of "Honey as Food," written by Dr. C. C. Miller. The last part contains "Honey-Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by every one who has honey for sale. It is almost certain to make good customers for honey. We know, for we are using it ourselves.

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FROM MANY FIELDS

Selling Honey in a Home Market.

Having had considerable experience selling honey to the consumer, I write for the benefit of beginners. I have been producing and selling honey, both comb and extracted, in Page County, since 1877, and have shipped very little to the wholesale houses. I find the home market better. Of course we cannot expect to sell the whole crop at once, but I frequently sell as much as a hundred pounds of extracted honey at a time to a consumer, but a dollar's worth of comb honey is as much as can usually be sold to the consumer at one time.

Considerable comb honey can be placed with the grocers and will lessen cash outlay for provisions, at least it is advisable to keep them supplied with what they can use. I think it is a good plan to keep honey on hand at all times, as I have more call and get better prices after others have sold out, and in off-years I produce about two pounds of extracted to one of comb, and find the production of extracted much more satisfactory than comb.

I have tried selling from house to house, on the sample plan, and have succeeded very well, but as I do not like canvassing I do not resort to this plan excepting when a large crop makes it necessary to prevent one crop lapping over another; this has seldom been the case. I have some customers in other States who order from 50 to 100 pounds for home use, when I can sell at 9 or 10 cents per pound.

This has been the most favorable season we have had for several years; it gave me over 5000 pounds from a start of 50 colonies in the spring, and 20 bought during the season, and run largely for queen-rearing.

I have put 126 colonies into cellars, 35 of them queen-rearing colonies on small combs, with 21 colonies packed in double-wall hives on the summer stands. The colony on scales gave 265 pounds of extracted honey for the season. The best day was July 8, which gave 15 pounds net gain for 24 hours; to make this gain they must have carried over 20 pounds, as I find a shrinkage of 3 or 4 pounds during the night after a good day's work.

J. L. STRONG.

Page Co., Iowa, Nov. 26.

Castor-Oil and Honey—Peddling.

I notice the editor desires the bee-keepers to tell the new kinks they have learned. I learned one just the other day, when I was peddling honey. A man said he tried to get one of his little boys to take castor-oil, and he could not get it down him. He then mixed it with honey, and had no more trouble. How easy! I wish we could fix up all our troubles and make them sweet as honey.

I suppose most bee-keepers have a cloth over the top of the hive, to keep the bees from sticking the cover fast, and they are always eating it full of holes. Mine don't. I use mostly pieces of gunny-sacks, but old ingrain carpet without any holes is dandy. Cut your pieces to fit, then give each piece a good coat of lard—old, rancid lard is as good as any. The bees will coat it over with glue and never gnaw a hole in it. Warranted; patent not applied for.

I had 1500 pounds of extracted honey and 200 pounds of comb honey from 22 colonies, spring count, and increased to 32 colonies.

I have been in business here only 2 years. I learned the trade in the West, where I had no trouble at all to keep the bees from swarming. I think it must have been the cool nights; here it is altogether different, but I think I can keep the most of it down.

I peddle out all my honey. The best way I have found to peddle extracted honey is to have a heavy galvanized-iron can that will hold 12 or 15 gallons (that would be 144 or 180 pounds of honey), with a pair of drop handles riveted to the sides near the top, the cover to fit over the top and drop down about 2 inches with a handle to the top of it. Then getting

4 Percent Discount During December!

Send for our List, and order now. Take advantage of this discount. Have your goods on hand ready for use.

JUST THINK OF IT!

If all of the Sections we sold last season were placed unfolded, in a straight line, the line would reach over Three Thousand Five Hundred Miles.

G. B. LEWIS CO., Manufacturers' of Bee-Keepers' Supplies,
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In No-drip shipping-cases. Also extracted, in barrels or cans. Mail samples and quote your best price delivered Cincinnati.

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REMOVAL NOTICE.

We wish to advise our friends that on and after Jan. 1st we shall be located in our new 3-story building, 521 Monroe Street, where we shall keep on hand at all times the largest stock of

Poultry and Bee-Keepers' Supplies in the West.

Remember, we handle ROOT'S GOODS exclusively, and with the low freight rates, and the 4 percent discount which we offer during December, enables Toledo to excel all other shipping points. Thanking you for past favors, and soliciting a continuance of the same, we remain,

Yours truly,
GRIGGS BROS., 521 Monroe St., TOLEDO, OHIO.

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I can sell you a White Glass Honey-Jar, holding 15 ounces of honey, at $4 00 per gross. Also the standard square, one-pound Jar at $4.50 per gross. Sample of either Jar by mail on receipt of 10 cents for postage.

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Reduced Rate for Christmas and New Year Holidays.

The Nickel Plate Road will sell tickets Dec. 24, 25 and 31, 1903, and Jan. 1, 1004, at rate of a fare and a third for the round-trip, within distances of 150 miles, good returning to and including Jan. 4, 1904. Individual Club Meals, ranging in price from 35 cents to $1.00, served in dining cars. No excess fare charged on any train on Nickel Plate Road. Chicago City Ticket Offices, 111 Adams St., and Auditorium Annex. Depot, La Salle and Van Buren Sts., on the Elevated Loop. 'Phone Central 2057. 30—49A4t

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42A11t R. H. SCHMIDT CO., Sheboygan, Wis.

a self-measuring molasses-gate—that is far ahead of the common honey-gate—and have it soldered very solid to the can; have the bottom slant about 1½ inches from back to front. Make a solid box 10 inches high for the can to rest on, with cleats on top to keep the can from slipping. Bolt the box fast to a low spring wagon, just behind the seat, and tie the can solid from each side. Then you are ready.

I think I have the best wire-imbedder that is sold, or that I have heard of, so far. I have used it 5 years, but I will tell you about that some other time. W. A. MOORE.

Delaware Co., Ohio, Nov. 17.

Best Hive for Women—"Baching."

On page 728, the question is asked: Which is the best hive for women, the 8 or the 10 frame? I believe this is altogether a question of locality, and whether we wish to work for comb or extracted honey. In this locality the 10-frame hive becomes a nuisance when worked for comb honey, because the bees store so much honey below in the frames that the queen is almost crowded out. I use the 8-frame size entirely, and in the fall I extract 2 frames of honey from the sides of the brood-chamber, leaving the bees on 6 combs for winter. I have practiced this for several years, and I find that 6 combs are amply sufficient for their winter stores, and then I have 2 empty combs to give the queen in the spring, when otherwise they would be filled with candied honey and be comparatively worthless.

I believe in most localities, that with the above management, bees would starve before spring on 6 combs, but here the bees consume very little honey during the winter months, owing to the very even temperature—just a little too cold to start brood-rearing.

I have a plan of management which I have practiced for years, which is in my estimation far ahead of brushed or "shook" swarms for preventing increase and keeping all the force together at work in the sections, but I will have to defer this for another article.

I am surprised at C. H. Koentz for asking the Editor to help him out of his troubles. If he can't get a wife it's his own fault. He lives in a locality where the ladies out-number the men, 3 to 1, and he can find plenty of them that are "willin'." If he were baching out here in the West, he would have just cause for complaint. What few girls we have here are so independent that there is no doing anything with them. Now, if the Editor is going to take a hand, please don't forget us Westerners. I have been "baching" for 9 years.

I have 300 colonies of bees.

W. C. GATHRIGHT.

Donna Ana Co., New Mexico, Nov. 16.

Bee-Moth and a Bee-Hat.

Two years ago I brought 3 colonies of bees; one of the colonies swarmed 4 times last season, but did not swarm at all this summer, and only stored honey enough to last them through the winter. From the colony that did not swarm I took 50 or 60 pounds of good honey, and they died before spring with plenty of stores in their hives. I fed the late swarms, as the season was not good in our locality. I got 3 colonies out of 7 through. I divided and made 2 colonies, and the same colony that I took the two from swarmed later on, and I caught on, so I still have 7 for winter again. I have made good bee-houses to put the hives in, and leave them there winter and summer.

Some time ago I noticed in the Bee Journal that one of the bee-keepers wanted to know what made the moth. It is the butterflies; they alight down on the bees when lying out before swarming and deposit their eggs on the bees, so when the bees go in the hive to eat, the eggs will fall off of them in the hive, and are hatched out by the warmth, and so the moth is there. I kept all the butterflies killed off this summer, and am not bothered any more.

I will tell you what kind of a bee-hat I have. Take green screen-wire, one yard in length; cut some off the side, so it will be only two

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Root's Goods at Root's Prices.
Everything used by Bee-Keepers. POUDER'S HONEY-JARS.
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are the most economical to buy. Strong in mechanism — strong in talking qualities and guarantee. Send for free book F-4, "Telephone Facts for Farmers." It proves our claims. Address nearest office.
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Boys, Girls, old and young alike, make money working for us. We furnish capital to start you in business. Send us 10c stamps or silver for full instructions and a line of samples to work with. DRAPER PUBLISHING CO., Chicago, Ill.

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will sell tickets account of Christmas and New Year Holidays, at rate of a fare and a third for the round-trip, within distances of a 150 miles, Dec. 24, 25 and 31, 1903, and Jan. 1, 1904, good returning to and including Jan. 4, 1904. Through service to New York City, Boston and other Eastern points. No excess fare charged on any train on Nickel Plate Road. Chicago Depot, La Salle and Van Buren Sts.—the only passenger station in Chicago on the Elevated Loop. City Ticket Offices, 111 Adams St., and Auditorium Annex. 'Phone Central 2057. 31—49A4t

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On all orders where cash accompanies. We furnish everything needed in the Apiary.
Catalog and price-list FREE.
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or three inches above the head; sew it together by lapping a little. Sew some double thin goods on the top for a crown, then sew a skirt to the hat, and put a good, strong string on the skirt near the middle of the back and tie around the waist, to keep the hat from tipping off. Also, have a draw-string in the bottom of the skirt and draw around the waist. Put armholes in it, with sleeves to draw on, and tie just above the elbow. Then with good gloves, and pants or overalls tied at the bottom, you are safe from bee-stings.

NEBRASKA SUBSCRIBER.

A Farmer's Hive—Report.

An all-around farmers' bee-hive, good for men but not for women, is 18 inches long by 18 inches wide, and 12 inches high, with a good super to hold 40 sections 4¼ by 4¼ by 1⅞.

My honey crop was 500 pounds of nice white comb honey, while my neighbor bee-keepers got none. GEORGE KERR.

Kent Co., Mich., Nov. 27.

A Growing Bee-Keeper.

When I first subscribed for the Bee Journal I had only one colony of bees, and knew less about producing honey than they did. That was in the spring of 1900. This colony was the united forces from three trees in the fall, and fed on sugar syrup exclusively. I kept the queen 3 years. In 1902 I produced 1200 pounds of honey; 1903 finds me with a harvest of 1½ tons of honey, in charge of 110 colonies of bees, and a local trade in bee-fixtures started. The American Bee Journal has been "the whole thing" to me. H. H. CHASE.

McLeod Co., Minn., Nov. 24.

Beedom Boiled Down

Fighting Robber Bees with Fire.

F. L. Morrill had a bad case of robbing during a very hot spell. His account of it is given in Gleanings in Bee-Culture, and is in part as follows:

> The bees were crazy, and began stinging before I came within a quarter of a mile of them. The air was full of mad, stinging bees. I soon found that it was the worst case of robbing I had ever heard of. The whole yard of 180 colonies was demoralized. Some of the combs had melted in the extracting-supers; and as it was at a time of year when there was no flow of honey it set the bees to robbing. I did not dare to close the hives up entirely, on account of the heat; but I immediately closed the entrances so that only one bee could go in at a time, and then I tried everything that I had ever heard of to stop robbing, but with no success. The next morning I procured a brazing torch, such as painters use to burn off old paint, and taking a supply of gasoline, I went for the robbers. I went from hive to hive, throwing the flame on them as I went, wherever I found them trying to get in. They were gathered in great bunches on the now one-beeway entrances. I soon had to cover my hands, as this seemed to make them so mad that they would tackle even the torch. They objected to having their wings burned off, but I was in no mood for leniency. I worked nearly all day in this manner, and along in the afternoon had things somewhat quiet again.
>
> The next morning I used a kerosene-torch with just as good results, but I did not find many robbers, and the next day things were in normal shape again.

Roofs for Hives; Steel Roofs Short-Lived.

It is a very difficult matter now to get the old-fashioned iron in roofing-tin, the same as we used to get years ago. Iron made by the old process would last many years longer for roofing than the present steel made by the new process. Indeed, builders and contractors have come to recognize the fact that the new steel roofings, unless galvanized, are very short-lived. The modern method of making steel seems to take out some elements that protect it from rust. One would naturally suppose that painting this steel, and keeping it painted, would protect it thoroughly, but such is not the case. Some of the modern steel roofs that we put on our buildings rust right under a good coat of paint. An old contractor said to me the other day that he would never again recommend to his patrons steel roofing, as the asbestos, magnesia, fabric, or gravel-and-tar roofing were more durable.

BUILT TO LAST

Never outclassed—Sure Hatch Incubators. Built better than your house. No hot centers; no chilling draughts on sensitive eggs. Every cubic inch in egg chamber at uniform, blood temperature of fowl. It's a continual pleasure to hatch nearly every fertile egg with a Sure Hatch. Free catalogue B 10 with pictures tells lively story.

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Langstroth on... The Honey-Bee

Revised by Dadant—1900 Edition.

This is one of the standard books on bee-culture, and ought to be in the library of every bee-keeper. It is bound substantially in cloth, and contains over 500 pages, being revised by those large, practical bee-keepers, so well-known to all the readers of the American Bee Journal—Chas. Dadant & Son. Each subject is clearly and thoroly explained, so that by following the instructions of this book one cannot fail to be wonderfully helped on the way to success with bees.

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45A26t Please mention the Bee Journal.

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And this brings me to the question of tin roofs for hives. Unless the new modern steel is galvanized, it probably will not last as long as ordinary cheap paper; and an intending purchaser had better make his selection from covers made entirely of wood, or wood covered with paper, cloth soaked in white lead, or galvanized steel. Do not use tin, if you do not wish to have your roof rust in a short time.

A very good substitute for tin is muslin soaked in white lead. I saw some excellent covers protected with this material, in Colorado, that had been in use several years, were good then. The cloth will take up the oil; and if it is painted occasionally it will outlast tin a good many times over; and, what is of considerable importance, it is much cheaper.—Editorial in Gleanings in Bee-Culture.

Control of Fertilization.

This that has been so earnestly sought after, and which seems so difficult of attainment, appears to be losing ground as to its desirability. The following Stray Straw from Gleanings in Bee-Culture shows the wind blowing in that direction:

> Thinking it over carefully, I am inclined to lean toward the belief that entire control of fertilization might be a loss rather than a gain. If I can have control of the colonies that rear drones in my own and neighboring colonies, I believe that's all the control I want. In the mad chase after virgin queen in the upper blue, the "best man" will win. If the choice was left to me I'm afraid I'd make a bungle—[I am not sure but you are right. Even if we could mate successfully in a big tent, there are some hand-picked drones, apparently good, lusty fellows, that would make poor progenitors. It is getting to be the practice nowadays to rear drones almost ex-

A New Bee-Keeper's Song—

"Buckwheat Cakes and Honey"

Words by EUGENE SECOR.
Music by GEORGE W. YORK.

This song was written specially for the Buffalo convention, and was sung there. It is written for organ or piano, as have been all the songs written for bee-keepers. Every home should have a copy of it, as well as a copy of

"THE HUM OF THE BEES in the APPLE-TREE BLOOM"

Written by
EUGENE SECOR and DR. C. C. MILLER.

PRICES—Either song will be mailed for 10 cents (stamps or silver), or both for only 15 cents. Or, for $1.00 *strictly in advance* payment of a year's subscription to the American Bee Journal, we will mail both of these songs free, *if asked for.*

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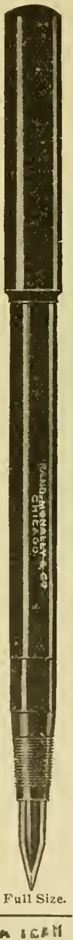
clusively from one or two choice queens in a queen-rearing yard, then kill off the useless ones, or keep them from developing. By so doing, don't we nearly control the parentage on both sides? And if the drone with the greatest wing-power is the best man, possibly he is strongest in other ways. In one of our yards during the past summer, the major part of our drones were reared from one queen—a queen whose bees make a big record in honey a year ago. The virgins of the same yard were reared from other queens whose bees did equally well. I had not thought of it before; but it strikes me the plan comes pretty near being equal to the "tent" plan of mating; for suppose we had a mammoth tent in successful operation, we would turn those same drones loose into that tent. Perhaps the really best man might weary himself to death to get out, leaving his less active inferior brother to perform the service. The question hinges down to this: Would hand-picked drones be better than Nature-picked drones? Nature works on the "survival of the fittest," and that plan has been working for thousands of years.—Ed.



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This Fountain Pen would be a splendid gift to a friend or relative. Why not order both Pen and Journal for some bee-keeper as a present?

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CONVENTION NOTICES.

New York.—The Fulton and Montgomery Counties Bee-Keepers' Society will meet at the Central Hotel, Market Street, Amsterdam, N.Y., on Tuesday, Dec. 22, 1903, at 10 a.m. This will be the regular business meeting of the Society for electing officers, payment of annual dues, and any other business which may come before this meeting. Annual dues, $1.00, which also includes a membership in the State and National Associations. T. I. Dugdale, Sec.
F. P. Jansen, Pres.

Missouri.—The Missouri State Bee-Keepers' Association will meet in Mexico, Mo., Dec. 15, 1903. J. W. Rouse will act as host to direct the attendants to the hall, which is free to all who desire to attend. Board may be had at the leading hotels at $1 to $2 a day. Come, everybody who is interested in bees and honey. Let us have a big meeting. We now have 51 paid-up members. Let us make it 100. Procure certificates from your local railroad ticket agents when you purchase your tickets. It may be you can return for ⅓ fare.
W. T. Cary, Sec. J. W. Rouse, Pres.

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WANTED—Extracted Honey.
Mail sample and state lowest price delivered Cincinnati. Will buy FANCY WHITE COMB HONEY, any quantity, but must be put up in no-drip shipping-cases.
C. H. W. WEBER,
2146-48 Central Ave., Cincinnati, Ohio.
24Atf Please mention the Bee Journal.

WANTED—Comb Honey in quantity lots. We are perhaps the only dealers in this article owning as much as 150,000 pounds at one time. Please state quantity, quality and price asked for your offerings, Thos. C. Stanley & Son,
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FOR SALE!
White Clover Extracted Honey, which was all taken from upper stories with a queen-excluder between, and the combs were nearly all sealed solid before extracting. It is very thick, and has that fine rich flavor that only honey thoroughly ripened in the hives can have. I would like to obtain a few more customers who would appreciate a fine article. Price, in new 60-lb. cans, on board cars here, cash with order—one can, 8½c a pound; 2 or more cans, 8c; sample, 8c. References: George W. York, the A. I. Root Co., and the Chatfield National Bank.
49A3t C. MONETTE, Chatfield, Minn.
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HONEY AND BEESWAX
MARKET QUOTATIONS

Chicago, Nov. 7.—The supply of comb honey is large, and sales are being forced, so that it is a little difficult to give accurate figures. Sales are not easily made of fancy at anything over 13c per pound, with less desirable grades selling lower. Extracted, white, brings 6@7½c, according to kind, flavor and package; amber, 5½@6½c. Beeswax, 28@30c.
R. A. Burnett & Co.

Philadelphia, Nov. 9.—Honey arriving very freely the last week and prices little easier. This month is best month in the year for demand of comb honey. We quote fancy white, 16@17c; No. 1, 14@15c; buckwheat, fancy, 15c. Extracted, white, 7@8c; amber, 6@7c. Bright yellow beeswax, 32c. We do not handle on commission. Wm. A. Selser.

Albany, N. Y., Nov. 27.—Honey market some lower since the cold weather and Thanksgiving demand over. We quote: Fancy white, 15c; No. 1, 14@14½c; buckwheat and mixed, 13c. Extracted, steady and quiet; buckwheat, 6½c; clover, 7c; mixed and amber, 6@6½c. Beeswax, 28@30c. H. R. Wright.

Cincinnati, Nov. 20.—The demand for comb honey is slower now than it was six weeks ago, owing to the enormous quantities offered on all sides. Fancy comb is sold in single case lots at 14c. The supply of extracted honey is big, although the demand is good. We are selling amber extracted in barrels at 5¾@6½c. White clover, in barrels and cans, 7½@8½c, according to quality. Beeswax, 30c.
The Fred W. Muth Co.

Buffalo, N. Y., Oct. 11.—The demand for white comb honey is better than it was. The trade is particular and wants only very white, clean stock. If the wax is yellow from travel-stain it does not sell well, and price has to be cut. Fancy white comb, 14@15c; A No. 1, 13½@14c; No. 1, 13@13½c; No. 2, 12@12½c; No. 3, 11@12c; No. 1 dark comb, 11@12c; No. 2, 10@11c. White extracted, 6½@7c; amber, 6@6½c; dark, 5½@6c. Beeswax, 28@30c.
W. C. Townsend.

Boston, Nov. 25.—Western honey is arriving more freely in our State, causing a slight drop in prices. Fancy No. 1, in cartons, brings 17c; A No. 1, 16c; No. 1, 15c. Extracted, white, 8½c; light amber, 7@7½c; amber, 6@7c, according to quality. Blake, Scott & Lee.

Kansas City, Oct. 23.—Receipts of comb honey good; demand good; market easier. Receipts of extracted light. We quote: Fancy white comb, 24 sections, per case, $3.00; No. 1, white and amber, $2.75; No. 2, $2.50. Extracted, white, 7c; amber, 5@6c. Beeswax, 25@30c.
C. C. Clemons & Co.

Cincinnati, Nov. 24—The demand for honey is a little better. The prices rule about the same. Extracted is sold as follows: Amber, in barrels, from 5¼@5½c; in cans about ½ cent more; water-white alfalfa, 6@6½ cents; white clover, 6¾@7½c. The comb honey market is quite lively, and it sells as follows: Fancy water-white, 14@15c. Beeswax in good demand, at 30c delivered here. C. H. W. Weber.

New York, Dec. 4.—Comb honey is arriving in sufficient quantities to supply the demand, and, as to the quality, most of the white honey seems to be off color, more or less. We quote fancy white at 14c; No. 1 at 13c; amber, 11@12c; and buckwheat, 10c. Extracted, light amber, at 6c; white, 6½c; Southern, 55@60c per gallon; buckwheat, 5½c. Beeswax, 28@29c.
Hildreth & Segelken.

San Francisco, Oct. 21.—White comb, 1-lb. frames, 13@14 cents; amber, 9@11c. Extracted, white, 5¾@6¼c; light amber, 5@5½c; amber, 4½@5c; dark amber, 4@4½c. Beeswax, good to choice, light, 27½@29c; dark, 25@26c.

Market is more quiet than for several weeks preceding, but is fairly steady as to value. Spot stocks and offerings of both comb and extracted are mainly of amber grades, while most urgent inquiry is principally for water-white, the latter being the only kind meeting with much competitive bidding from buyers. Recent arrivals of honey included a lot of 121 cases from the Hawaiian Islands. The bees of the Islands feed mainly on sugar.

WANTED! FANCY COMB HONEY
In no-drip shipping-cases. Also Amber Extracted in barrels or cans. Quote your best price delivered Cincinnati. The Fred W. Muth Co.
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are no better than those we make, and the chances are that they are not so good. If you buy of us **you will not be disappointed. We are undersold by no one.** Send for new catalog and price-list and free copy of THE AMERICAN BEE-KEEPER; in its thirteenth year; 50 cents a year; especially for beginners.

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W. M. GERRISH, Epping, N.H., carries a full line of our goods at catalog prices. Order of him and save the freight.

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You will have to get your inquiries in before Dec. 15 if you secure the 10 percent discount on Dovetail Bee-Hives made of Michigan white pine.

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This Emerson stiff-board Binder with cloth back for the American Bee Journal we mail for but 60 cents; or we will send it with the Bee Journal for one year—both for only $1.40. It is a fine thing to preserve the copies of the Journal as fast as they are received. If you have this "Emerson" no further binding is necessary.

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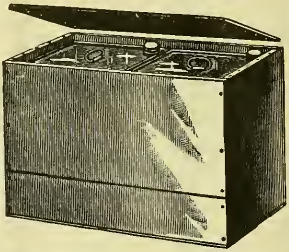

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Prices of Alfalfa Honey:	
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(Larger quantities at the 7½c price.)

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One 60-lb. Can @9c	$ 5.40
Two 60-lb. Cans (in 1 box) @8c	9.60

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AMERICAN BEE JOURNAL

Published Weekly by GEORGE W. YORK & CO., 144 & 146 E. Erie Street.

43d Year. CHICAGO, ILL., DEC. 17, 1903. No. 51.

The Los Angeles Convention of the National Bee-Keepers' Association,

Held in Los Angeles, Calif., Aug. 18, 19 and 20, 1903.

THE AMERICAN BEE JOURNAL

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GEORGE W. YORK.

DEPT. EDITORS,
DR. C. C. MILLER, E. E. HASTY, EMMA M. WILSON

IMPORTANT NOTICES.

The Subscription Price of this Journal is $1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

The Wrapper-Label Date of this paper indicates the end of the month to which your subscription is paid. For instance, "dec03" on your label shows that it is paid to the end of December, 1903.

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National Bee-Keepers' Association

Objects of the Association:

1st.—To promote the interests of its members.
2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

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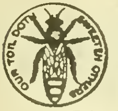
☞ If more convenient, Dues may be sent to the Secretary, at the office of the American Bee Journal.

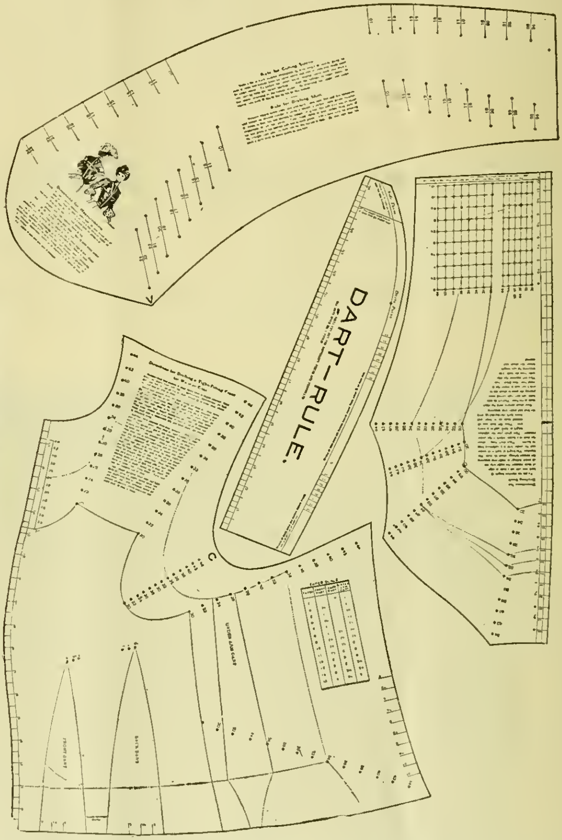
A Celluloid Queen-Button is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-lapel. It often serves to introduce the subject of honey, and frequently leads to a sale.



The picture shown herewith is a reproduction of a motto queen-button that we are furnishing to bee-keepers. It has a pin on the underside to fasten it. Price, by mail, 6 cents; two for 10c; or 6 for 25 cents. Send all orders to the office of the American Bee Journal.

Something FOR OUR Bee-Keeping Sisters in the Winter Time.

We think all ladies will agree with us in saying that every man should at least understand some business, with which, in case of necessity, he could support himself and family. The wealthiest people frequently come to want, and wretched, indeed, is the man who cannot earn a living after his wealth is gone. He sometimes fills the grave of a suicide. And why, in this enlightened age of progression, should not woman, as well as man, be able to depend on her own resources? In case her husband dies in poverty, must she starve or depend on charity? In case her husband fails to provide and grossly mistreats the woman he has sworn to cherish, must she humbly submit? **A THOUSAND TIMES, NO!** Let every woman, before she marries, have some knowledge that can be used to make her a living. Every mother, rich or poor, should make her daughters, in a certain degree, independent, by giving them some kind of a trade, and teaching them to be self-reliant. Mothers should have their daughters learn to sew, and not neglect this important part of their domestic education. The daughter so taught will not only make a better wife and mother, but will also be more likely to secure a better husband, and will always command his respect. He will not look upon her as a helpless "know-nothing," but will know that if he fails in his duties, she can live without him, and this can only strengthen the bond between them. A thorough knowledge of dressmaking can always be turned into gold, and become the means of support for the mother and her little ones. She may never have to use this knowledge in this way, but she has a trade and can use it if necessary.



The outline cut shown herewith is a condensed copy of **THE NEW LONDON LADIES' TAILOR SYSTEM** for drafting and cutting ladies' and children's garments. For simplicity and accuracy it has no superior among the more expensive systems. Thousands of girls have learned more about drafting and cutting with this system than they knew about it after serving their apprenticeship in some of the dressmaking shops of the United States and Canada. Thousands of the best garment cutters have laid their complicated and expensive system aside, and are now using **THE NEW LONDON TAILOR SYSTEM.** Thousands have been sold at $5.00 each, but we mail it **Free** to a paid-in-advance subscriber to the American Bee Journal for sending us **two new** subscribers at $1.00 each; or we will send it to any one with a year's subscription to the American Bee Journal, both for $1.75; or, we will mail the Tailor System alone for $1.00. Address all orders to

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AMERICAN BEE JOURNAL
ESTABLISHT IN 1861
THE OLDEST BEE-PAPER IN AMERICA

43d YEAR. CHICAGO, ILL., DEC. 17, 1903. No. 51.

Editorial Comments

Canadian Experimental Bee-Farm.

Quite interesting is the report which has been received at this office in the shape of "evidence" by Mr. John Fixter, the Apiarist before the Committee of the House of Commons. Some items from the report are here given:

> "We found that for the farmer the 9 or 10 frame Langstroth hive is the best, while for the experienced bee-keeper I would say that the 8-frame Langstroth hive is much better, because the experienced bee-keeper will look after his bees better than the farmer usually does, and will see they have plenty of stores in the bottom section to carry the bees over the winter. I would say that the ordinary farmer should have a little larger hive than the experienced bee-keepers, so that his bees will be able to look after themselves."

The difficulty of getting bees to start in sections, Mr. Fixter thinks, is in many cases attributable to the fact that very small starters are used, and he advises full sheets of foundation in all cases, both in sections and in brood-frames, especially in the case of the inexperienced.

The split-top section, in use on this side to some extent many years ago, is mentioned as a new section only lately introduced, the split in the top-bar being an improvement, and making it much handier for the inexperienced bee-keeper.

Mr. Fixter says it has been very strongly recommended by the best bee-keepers in Ontario to wire brood-frames vertically rather than horizontally.

Experimenting with buckwheat, that sown June 16 came up in 7 days, and bloomed in 32 days from the time of sowing. That sown June 29 came up in 6 days, and bloomed 32 days from sowing. That sown July 6 came up in 7 days, and bloomed 37 days from sowing. That sown July 16 came up in 5 days, and bloomed 35 days from sowing. In each case the bees began work on it as soon as it was in bloom, the earliest interfering with the white-honey harvest, so it is advised to sow not earlier than July 1.

Regarding the wintering of bees, Mr. Fixter reports:

> "We have tried very extensive experiments in wintering bees in the following situations: In the cellar of a private house; in the root-house where the roots are kept; in a pit, that is, a hole dug in the ground on the hill-side; out-of-doors, on the summer stands, and also in the house-apiary. We found that wintering in the cellar is the best method in this section of the country, and I am safe in saying it is better to winter in the cellar in any section of the country where the thermometer goes down to 10 degrees below zero. The amount of honey consumed by outside wintering will be about one-fourth or one-half more than it will be by wintering inside."

A Problem About Watery Honey.

Quoting from this journal, a York County Bee-Keeper says in the Canadian Bee Journal:

> "In 'Editorial Comments,' page 627, I find this: 'Good honey contains in the neighborhood of 1-6 of its weight in water; in a moisture-laden atmosphere it may attract to itself so much moisture as to be nearly half water.' Now, we will take, for instance, a barrel of 1000 pounds of good honey with the bung-hole left open, said barrel being stored in a moisture-laden atmosphere. It would draw into itself the difference between ½ and 1-6, which is ⅓; ⅓ of 1000 pounds is 333⅓ pounds; the total honey and water in the barrel would then be 1333⅓ pounds, would it?"

Rather than to have the thin honey nonplused as to its course of action, why could not our good Canadian friend put it in a larger barrel?

Does it absolutely follow that, "water being lighter than honey, the barrel could not begin to hold that amount of honey and water?" Fill a pail with leaden bullets, and you may add several pounds of water without making the pail any fuller, although water is much lighter than lead. Is it not possible that there may be some kind of an understanding between honey and water that will allow both to occupy nearly the same space, just like the water and the bullets?

But what law is there to prevent the barrel overflowing whenever it became too full? That's exactly what happens in a sealed cell of honey when it stays long enough in a damp place.

Preparing Alcoholic Drinks with Honey.

This seems to be an important part of bee-keeping in other countries, and one is wearied with seeing page after page of the foreign journals occupied with telling about such things. It is refreshing to find in the British Bee Journal the following protest against having such matters in a book intended for public instruction:

> "However good the various recipes may be, we can not too strongly deprecate the giving of alcoholic beverages such prominence in a book intended for children, and we should be surprised if the Board of Education would approve of its use in schools."

American bee-papers have no space to worse than waste in that way. Alcohol is a poison, and its use should be restricted to mechanical and medicinal purposes, and in the arts. But some people are so "artful" that they think they must put it into their stomachs as a drink, and then the trouble begins. We never publish a recipe for making an alcoholic drink.

Bee-Licenses for Out-Apiaries.

This is a live topic in the Australian Bee-Bulletin. A good deal of government land is occupied with trees that are great honey-producers, and squatters and others ring-bark these trees so as to kill them. This helps the grass-pasture for stock, but is rough on the bee-pasture. There seems a desire to have for other parts the advantage bee-keepers have in Victoria, viz.:

> The Victorians have an arrangement with their Government whereby they can secure a license for the purpose of "a bee-farm not exceeding an acre in extent upon any crown lands, or upon any lands held under a pastoral lease, or a grazing area lease, or annual grazing lease." And ring-barking upon such land is expressly forbidden.

Time for Development of a Queen.

Commenting on a recent publication, the British Bee Journal says:

> On page 13, perfect queens are said to be "produced on the fourteenth day after the eggs are put into royal cells," instead of the sixteenth, which is the usual time.

Could not our esteemed cotemporary make a compromise between 14 and 16, making it 15, so as to agree with the teachings of "The British Bee-Keepers' Guide Book?"

Two Queens in a Hive Eight Months.

This is reported by the editor of the Australian Bee-Bulletin. They are mother and daughter, the mother having not a vestige of wing.

Miscellaneous Items

The Arkansas Valley Bee-Keepers' Association was organized at Lyons, Kans., Dec. 5, with the following officers: President, Dr. G. Bohrer; Vice-President, J. D. Moser; Secretary, F. A. Wilber, Route 2, Lyons; and Treasurer, W. H. S. Benedict. We wish the new organization every success.

* * *

The Elgin County Bee-Keepers' Association, of Ont., Canada, was organized Nov. 21, with the following officers: President, Morley Pettit; Vice-President, J. A. McFarland; and Secretary-Treasurer, W. J. Robb. Organization seems to be the order of the day. It's a good thing for bee-keepers to get together.

* * *

A Stormy November.—The San Francisco Examiner for Dec. 1st, says that last month will go on record as the most stormy November California has had for 55 years. The normal rainfall for the month is 2.77 inches. Prof. McAdie, of the Weather Bureau, says that last month gave California 4.24 inches. This ought to cause the hearts of California bee-keepers to rejoice.

* * *

A Thermometer of good size has been received at this office from our excellent advertising friend, Walter S. Pouder. The wood part has printed on it Mr. Pouder's advertisement as a dealer in bee-keepers' supplies. It is a very useful article, and will serve to indicate the temperature in our office. Many thanks, " Walter."

* * *

The Chicago-Northwestern convention, whose very successful meeting we announced last week as having been held Dec. 2 and 3, re-elected its officers, as follows: President, George W. York; Vice-President, Mrs. N. L. Stow, and Secretary-Treasurer, Herman F. Moore, Park Ridge, Ills. In the notice given last week we overlooked giving the officers-elect. The writer being one of the number, perhaps the oversight is pardonable.

* * *

The Minnesota State Convention was held Dec. 2 and 3, at St. Paul, and it is reported to have been one of the best meetings that Association ever held. The officers elected are as follows: President, Dr. E. K. Jaques; 1st Vice-President, Scott La Mont; 2d Vice-President, W. R. Ansell; 3d Vice-President, P. J. Doll; Secretary, Mrs. W. S. Wingate, Richfield, Minn.; Treasurer, Dr. L. D. Leonard; and Executive Committee, H. G. Acklin, Wm. McEwen, and Wm. Russell.

* * *

A Big Honey-Tree Story.—The Lacon (Illinois) Journal published the following yarn about bees and a honey-tree lately. It fell into the hands of Mr. E. H. Beardsley, one of our subscribers, who sent it in. We think it compares favorably with some of the stories they tell of Texas bee-caves. We would have been willing to allow the Lone Star State to do all the "shining" in that line, but some Illinoisan evidently thought he must get up a whopper, too, and so he twinkles out with this one:

"This is a great year for honey. The white clover has been so plentiful that the only thing that has limited the production of the busy little bee has been the want of room. But this was not the case with a bee-tree that Bill Farr discovered one day last week along the banks of Mosquito Creek. Bill says that the tree is at least four feet in diameter, and is hollow from top to bottom. There appears to be only a thin shell inside the bark. His attention was attracted to the tree by the honey seeping through. He thought of cutting the tree down at first, but finally a better way suggested itself. He came to town and got one of those long copper faucets that they tap beer-kegs with. Then he bored a hole and drove the faucet in up to the hilt. Now, whenever he wants a few buckets of honey he goes to the bee-tree and turns on the faucet, and it runs out like molasses out of a sorghum barrel. He has already taken out 17 gallons, but it seems to run just as free as ever. The bees appear to make it as fast as he takes it out.

* * *

Rev. R. B. McCain, of Grundy Co., Ill., is perhaps one of the most successful new bee-keepers in the country. He was at the recent Chicago-Northwestern convention, and after arriving home and thinking it all over, he wrote us as follows:

Dear Mr. York:—Allow me to say that I thoroughly enjoyed the convention. I think the time well spent. I was glad to meet the bee-keepers, and to make the acquaintance of so many clean, honorable, fine-spirited men. There must be something elevating in the bee-business, or else it is attractive to men of good habits and high moral purposes. And in this same connection let me say that it is a very great gratification to me to find that the American Bee Journal is not wanting in these same qualities. It goes a long way toward offsetting some of the evidences of sordidness and dishonesty which we find in the world, when we mingle with men whose lives are not circumscribed by the dollar-mark, and who undertake to conduct business enterprises on sound moral principles. I am sure that I can very heartily wish every one of them the best success. I am,

Very sincerely yours, R. B. McCain.

In the right kind of life there is always more than dollars and cents, and things that only endure on earth. Lots of bee-keepers are also interested in possessing eternal characteristics, and *all* may do likewise if they choose.

Some Expert Opinion

"In the multitude of counsellors there is safety."—Bible.

Number of Brood-Frames for Comb Honey.

If for some reason you were to start in anew to keep bees, and were obliged to get an entirely new outfit—

Ques. 2.—How many frames for comb-honey production would you use? Why?

N. E. France (Wis.)—8.

Wm. Rohrig (Ariz.)—I do not produce comb honey.

O. O. Poppleton (Fla.)—I do not produce comb honey.

Mrs. J. M. Null (Mo.)—10. Get better results in every way, in this locality.

Prof. A. J. Cook (Calif.)—10, as this is the number in the hive preferred, as given in Question No. 1.

Dr. J. P. H. Brown (Ga.)—9 or 10. In my climate and location this number would take all the sections that the colony could use.

R. L. Taylor (Mich.)—Either 8 or 16 Heddon frames, according to circumstances. The less number when practicable to get the white honey into the sections.

E. E. Hasty (Ohio)—7—more if the field is a good one. Because I have been so doing for many years, and sufficient reasons for changing do not seem to appear.

Eugene Secor (Iowa)—8. Because, in my experience, I think it is about right. And, for indoor wintering, the hive is more easily handled than a larger one.

Geo. W. Brodbeck (Calif.)—8 frames. Give all the room necessary for the queen to breed in during the honey-flow, leaving no surplus room for storing honey.

Mrs. L. Harrison (Ills.)—8. In this locality I tried the 10-frame hive, and it took so long to fill the hive that the bees completed a much smaller amount of white clover honey.

P. H. Elwood (N. Y.)—We use 7, usually, and sometimes 8. We like to have the frames pretty well filled with brood, and the number of frames used depends upon the queen and the season.

E. S. Lovesy (Utah)—9, still having the winter problem in view. It makes a hive about the same in width, length and depth. The hive being double wall, a super containing 21 or 28 sections could be used on it.

C. Davenport (Minn.)—8. Because in my locality I can secure more surplus honey than I can with more. I have given this matter a thorough trial, in a large enough way, so I have no doubt about the matter.

Jas. A. Stone (Ills.)—10 frames for any purpose. For the reason that they are the mean between the two extremes, some preferring larger and some smaller, so we choose the 10, and see no reason for a change.

C. P. Dadant (Ills.)—10, with a dummy occupying the space of another frame. Because this would give sufficient space for brood and honey with a frame of the size mentioned previously, and because the super space would be quite ample.

G. M. Doolittle (N. Y.)—10 Langstroth frames. Because some queens require that number of frames, and it is very easy making the same into an 8-frame hive, by slipping in a dummy on each side to take the place of the two frames taken out.

Rev. M. Mahin (Ind.)—I produce but little comb honey, and sell it all at home, and I am not authority. The number of frames I use are about equivalent to 8 Langstroth frames, and for my locality that is large enough, and not too large, for either extracted or comb honey.

C. H. Dibbern (Ills.)—I would use 10 shallow closed-end frames to give as much room on top as possible. I prefer to use cases to hold 40 sections or more, rather than more cases with less sections. 2d, the bees are kept in a more compact bunch, and do not have to travel so far.

Dr. C. C. Miller (Ills.)—I don't know. If I had only one apiary, or didn't care for the weight of hives in moving, I would use 10 frames, because there is less danger of going into winter short of stores. On account of greater ease in lifting and moving the smaller hives, I now prefer 8 frames.

J. M. Hambaugh (Calif.)—I am not good comb honey authority, not being a specialist in that line. I am sure, however, I would not use a brood-chamber of less than 3000 cubic inches capacity. You can contract a large brood-chamber, but you can not expand a small one. I would want a 10-frame hive, but locality has something to do with this question.

Adrian Getaz (Tenn.)—Not more than 9. With more than that the supers are too heavy. Furthermore, when giving the first super to the colony, the weather is not very warm yet, and giving too much space then is injurious, as the bees can not keep up the proper temperature in a too-large space. The frames should be deep enough to make up what they lack in number, so as to have the brood-nest of the proper size.

E. Whitcomb (Nebr.)—The colony will in no case begin to store comb honey until the brood-chamber is first well filled. I deem it better to tier up than to spread over the ground too much. The 8-frame hive is easier to put into winter quarters; it isn't so hot to work over in summer; it costs less money to make, and with the present price of lumber, all these questions must be taken into account lest we come out on the wrong side of the ledger.

J. A. Green (Colo.)—Either 8 or 16 of my shallow frames, according to circumstances. To explain fully the "why" of this would require a long article, or several of them. Briefly, because one section of the brood-chamber, or frames, is enough for the most profitable production of comb honey at certain times; while two sections, or 16 frames, are large enough at any time, and just right for profitable wintering and the building up of good colonies in the spring.

G. W. Demaree (Ky.)—No answer to this question can be made to apply to all conditions in so great a country as this. Each bee-keeper should study his own environments, and work in accordance with Nature's laws that are immovable. In the Middle States, where the spring bloom may begin as early as March 20, giving the bees time to build up strong by the time the white clover harvest begins, the 10-frame Langstroth hive will give from 10 to 25 percent more comb honey than an 8-frame hive will, under the same management. Why? Well, the honey will show why!

L. Stachelhausen (Tex.)—I would use 10 frames in one story. For comb-honey production this gives a larger top surface than 8 frames, consequently more room for sections. In winter and spring I would use two stories; this gives plenty room for the development of a strong colony. When the honey-flow commences, and the sections are given, 10 frames containing the most brood would be crowded into one story. The other combs without bees are used elsewhere in the apiary. This forces the bees at once to commence work in the sections. Larger hives (for instance, 12 frames) are not as handy to manipulate; smaller hives (8 frames) are out of shape, and cost more per frame.

S. T. Pettit (Ont.)—The hive full until after swarming. For best results the hive must be practically full of brood from side to side when the sections are put on. I would not weaken the bees on any account by removing brood before swarming. At swarming, I would put them on one full frame near the center; then five or six dummies about one-half at each side of the hive; then fill up the center with starters. The full comb catches the pollen and carries a part of the weight of the bees, thus relieving the starters and the newly-built combs. If the bees are up to the mark in strength, and the top-bars thin, and if an all-metal queen-excluder, wedges and dividers, be used, I never could see but that the work over the dummies was just as good as over the brood, and I have taken many thousand sections in this way. These directions apply to a 12-frame hive; other hives may be treated similarly.

R. C. Aikin (Colo.)—With my shallow 5x16 frames, I would use 8 to 16, usually 16, *during the flow while storing surplus*; but all the rest of the year, where out-door wintering is practiced. I would use 24, especially immediately before the surplus flow came on. Of these frames 8 are equal to 4 Langstroth frames, 16 to 8, and 24 to 12. The *why* is, that a large hive in the fall gives breeding-room, and store-room, too, so that at no time need the brood be unnecessarily reduced in quantity, thereby, in most cases, and particularly with young queens, insuring a good force of bees to start into winter. I would keep the brood-chamber large in spring because it gives more encouragement to breeding (note that the surplus room would be *beneath* the brood with such a hive), and tends to discourage swarming. When the flow arrives, contract to about 8-Langstroth-frame capacity—sometimes less. With a small chamber—6 to 8 Langstroth frame—during the flow, better finish and better results all around with small chamber, and more so with light flows or weak colonies.

Why Not Help a Little—both your neighbor bee-keepers and the old American Bee Journal—by sending to us the names and addresses of such as you may know do not now get this journal? We will be glad to send them sample copies, so that they may become acquainted with the paper, and subscribe for it, thus putting themselves in the line of success with bees. Perhaps you can get them to subscribe, send in their dollars, and secure for your trouble some of the premiums we are constantly offering as rewards for such effort.

Convention Proceedings

THE LOS ANGELES CONVENTION.

Report of the Proceedings of the 34th Annual Meeting of the National Bee-Keepers' Association, Held at Los Angeles, Calif., Aug. 18, 19 and 20, 1903.

(Continued from page 791.)

OVERDONENESS OF BEE-KEEPING.

"Is bee-keeping overdone? Is all territory occupied?"

John F. Crowder—No, it has not begun yet. Up in the San Joaquin Valley the country is improving all the time; new alfalfa fields are growing all the time, and the bees don't quite keep pace with the increase. There are new fields in my territory.

T. O. Andrews—If they get into the fashion of cutting the alfalfa as they do here—they cut it eight and ten times—don't give it a chance to bloom. I doubt if there is 100 pounds, or 1000 pounds, of honey produced in three or four counties in this part of the State.

J. P. Ivy—I think the people that live in a locality have a great deal more to do with it than the locality. I have yet to know a community where a bee-man would be welcome with bees.

OVERSTOCKING A LOCALITY.

"What can be done to keep bee-keepers from imposing on each other by placing a large apiary close to another one?"

Dr. Miller—However difficult that question is, it is a question that will come up practically to many of your minds. A good many years ago I called down the anathemas of nearly the entire bee-keeping fraternity by saying that I believed that every man should, in some way, have some legal title to his locality. They asked me whether I meant it. I did mean it. I believe that a man should have, and if the thing proceeds far enough, it will some time come to that, and I stand here, with the risk of being called crazy again, to say to you that if bee-keeping is conducted on a safe basis, as other business, a man must have some kind of assurance that the territory he occupies will remain his.

George M. Wood—I wish to say to the bee-keepers here that this is one of the most vital questions that can be brought before this Association. We have been in this business, some of us, for years. I have been keeping bees in this county for 25 years. I first commenced in Sacramento, buying a lot of bees in Mr. Harbison's hives. I had peaceable possession of a range for 20 years. It is due to every man that his own earnings be protected. Are we going to let one man, or two men, come on either side of us with 100 or 200 colonies of bees, and put them on either side of my apiary, or your apiary, just as he sees fit, asking no questions whether it is right or wrong, whether it is benefiting you or injuring you? What are we going to do with this? Are we going to conduct this business on a peaceable principle? If we are, we want to know it. Will there be some resolution adopted in this Association to protect every man's interest in his bees? I do not care who he is. That is the law. All men need to protect themselves. If you are going to be infringed upon, protect yourself. You will be respected for protecting your house and your family, your property and your civil rights. Let this question be brought up, and let it be read in your households, by your firesides, by every bee-keeper in the land, and let the principle be lived up to. This is a question that is too little thought of in this Association, or in the United States. You can infringe on one man more than another. There is a little range over there. He has been there a number of years; he has a right to that range. If he owns a good location there, he has a right to a good range. Let us bring this question before the Association, and try to have some action taken on it in the future. What do you say about it, gentlemen? Such is going on all the time.

Delos Wood—I do not agree with Dr. Miller, nor with the man who has just spoken, who has the same name as I have, but we are not related, that I know of. Suppose this man owns a farm, and possibly 200 colonies of bees on it. Suppose my friend, Dr. Miller, buys a farm and puts 200 colonies on it, and I buy a farm between them, and put on it 1000 colonies of bees. Who has a right to the range?

Mr. Crowder—I have had as much experience in moving apiaries, and having to move in different localities, as much, I think, as anybody in the State. If you don't own the land somebody may make you move off. I started in on one piece of land, and another bee-keeper came in and bought this land, and I had to go.

W. D. French—I think that any man who respects his neighbors—any bee-keeper, it seems to me—should know better than to infringe upon his neighbors. The moral part of if it is good, but this Association never can do anything, and no laws could be passed that would be legal, that would prohibit one man from operating on his own territory. It is very good to talk it up, but it is not within the jurisdiction of the people themselves, because any law of this kind passed by any legislature would be unconstitutional, and there is nothing that would prevent any number of men keeping bees together. The moral part of it is very good, indeed, but it can not be helped by any legislation.

Mr. Abbott—What can we do to keep the other fellow from selling supplies where we sell?

Mr. Corey—Like Mr. Harbison, go far out in the mountains, where nobody wants to go, and nobody wants to go to church, school, or anything of the kind, and buy all the land that joins you, and if you can not do that, lease all that is around you!

BEST SEPARATOR—COMB HONEY IN CARTONS.

"What is the best all-around separator for comb honey?"

A. I. Root--Fence.

"Will it pay the comb-honey producer to put his best grade of comb honey in cartons?"

Dr. Miller—I think that depends entirely upon the market. There are markets which will pay for cartons, and give the advanced price. Other markets will not stand it at all.

Mr. York—As a dealer, I would prefer not to buy the honey in cartons with the producers' card on, as I wish to put it up in cartons with my own name on as seller.

STOPPING THE ADULTERATION OF HONEY.

"What is being done to stop the adulteration of honey, and what can we do to stop it?"

Mr. Benton—There has been a great deal of effort in the city of Washington to secure the passage of a Bill which should forbid the adulteration of honey, and putting it on the market under the name of honey—not to forbid the adulteration of honey, but to forbid its being put forth under the name of honey, when it is some other substance than honey. This Bill was introduced into Congress by a congressman from Pennsylvania, now deceased. At the same time one was introduced into the Senate, and year after year the Pure Food Congress met there and urged the passage of this Bill; not this Bill alone, but a Bill for pure food in general, and it included honey. It is now simply awaiting reintroduction. In that case a standard would be adopted for honey as well as other substances, and the substance would be collected and examined by the Chemist of the United States Department of Agriculture, who would then be empowered to decide as to the purity or non-purity of the substance; the parties could then be proceeded against under statute of the United States. This would regulate the sale of these articles in States and Territories under the government. It would still depend upon the States to take similar action. It depends a good deal upon people who are interested in the sale of these articles to push forward such a Bill as a model for all the States. It will come up at the next session of Congress.

Chairman—Is it not a fact that there was a Pure Food Bill slipped through, and the United States Government is now getting in shape to get it enforced?

Mr. Benton—There was a Bill regarding foods from foreign countries, but that covers only the importation of goods from foreign countries.

Prof. Cook—I think this is a very important matter. As I understand it, the Pure Food Law passed the lower house, but did not get through the Senate. I think we should do all we can to get it through. We ought to have it. It is one of the great necessities. We ought to reach out as strongly as we can in our State. That is something we ought never to lose sight of, and use every occasion we can to push legislation in that direction.

F. G. Teachout—Would it not be in order to appoint a committee to look after this matter, and urge it on, to do anything that can be done?

H. H. Hyde—I think the proper man to help it on is Mr. France. Let all of you work on your Senators, and let us request Mr. France to do all he can.

Chairman—Would it not be well to pass a resolution embodying these sentiments?

Mr. Hyde offered the following motion, which was seconded, put, and carried:

Resolved, That the National Bee-Keepers' Association urge upon their representatives in Congress, and in the Senate, to take up the matter of the Pure Food Bill in the interests of the people, and urge its passage.

QUEEN-BREEDER'S RIGHT TO A LOCALITY.

"The right of a bee-keeper to the undisturbed possession of the honey-field he occupies has received considerable attention and recognition of late. Should not the field occupied by a queen-breeder with a given race be similarly respected?"

J. K. Williamson—If you will all read Carlisle's "Title Deeds to Land," it will settle some of the difficulties of this question of property rights.

Frank Benton—It seems to me you are mistaking the scope of these questions, somewhat. Nobody claims that a man has a legal right to control honey produced on his neighbor's land or the public domain. Nobody has suggested a legal right. The whole question, it strikes me, is, as bee-keepers, should we not respect the rights of others in these matters from a moral stand-point? If a certain man, Dr. Miller for instance, has located his bees somewhere, would it not be, to a certain extent, immoral if I should go right across the road and start up the same business? I do not for one moment think I would not have a legal right to do that.

Speaking more to the question, a queen-breeder should have a moral right from the same stand-point. He is located in a certain region; let him have a fair chance, at least, of a pure mating of queens with the drones of a common race—the right of mating there for a large area. He may have a great many colonies of Italian bees; I may have a right to bring in a lot of those dastardly (!) Cyprians and spoil his Italians. Then I might bring in Carniolans; I might even put blacks in there. I might take an actual occurrence. I have been trying the Cyprian race of bees, and one reason I tried that race was I did not know they were supplied by any other apiary in the United States. I did not know to whom to recommend them. Another thing, the Department of Agriculture has sent out queens of this race. As they happen to own no bees, I put into the Department there an apiary of Cyprian queens, and furnished the stock to the Department free of cost, never receiving one penny for them. The A. I. Root Co. have an establishment three blocks below them, where they sell goods. You all know the stand taken by this firm on this point: that it was a moral wrong to encroach upon another man's territory. Yet they, or their agents, have put into that piece of property below there all sorts of bees, and that destroys utterly any experiments I might be making in that locality. Now, I doubt not they are not living up to the idea advocated as to the right of a person to the territory. I would not go down and set up an apiary beside one of pure Cyprians, and put Carniolans in it. I think the point as regards a queen-breeder is even more important than a honey-producer, because a queen-breeder goes into a locality he has selected, and it will be, perhaps, harder for him to select a locality free from contamination. Furthermore, his queens are going out all over the country, and the injury extends beyond him.

Emerson T. Abbott—I want to tell something the A. I. Root Co. did. They got a letter from a man in my town, asking if he could buy supplies from them, and they wrote back. saying: "Mr. Abbott sells supplies in St. Joseph, and we prefer not to sell to you." And I am not their agent, either!

BEES WORKING ON DIFFERENT FLOWERS.

"Bees are never seen working on two kinds of flowers at a time. Thus, Nature's plan is for bees to work on one kind of flower at a time, and carry its pollen from flower to flower, which helps the fruit."

Dr. Miller—The only question in that is a statement, and the statement is not strictly true. Bees do work on more than one kind of flower. I have seen them. but not very often.

Frank Benton—Pollen from distantly related flowers, pollen not closely related, would not cross with any other, even a variety of the species.

REPORT OF COMMITTEE ON AMENDMENTS.

Mr. Marks—On behalf of the Committee on Amendments, I beg leave to report the following amendments to the Constitution, in accordance with Article IX of the Constitution: [These appeared on page 595, and as they are of special interest only to members of the Association, and as they will get them in the General Manager's Annual Report this month, we do not give them again here.—EDITOR.]

E. T. Abbott also handed to the Secretary copies of some amendments which he desired to have submitted to the membership of the Association at the next election. Owing to strenuous objection being made on account of their not having been presented to the Committee on Amendments, Mr. Abbott relieved the Secretary of them. During this part of the last session there was considerable wrangling, after which a special committee was appointed to determine what action should be taken in regard thereto. A recess was declared, at the close of which T. O. Andrews, secretary of the committee, being called on, said: "We beg leave to report that we recommend adjournment at once." On motion, the report was adopted, and the convention adjourned to meet in 1904, at the call of the Executive Committee.

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

A Sister's Experience With Bees.

I have had a good deal of experience in keeping bees. I like the Bee Journal very much, and keep them all in a box. I have never read nor seen any bee-books. I do almost all the taking care of the bees and honey. I had 34 colonies last spring, and increased 16. I prevent my bees from swarming, and run them for comb honey. I have had good sale for all the honey my bees have gathered. I have had a bountiful crop this year. Two years ago a swarm came to my bee-yard from parts unknown, and they gathered 271 pounds of surplus comb honey this year.

I like the Sister's department very much. I think it should be made into a book, so that it will be a record left after we are gone to "the other shore."

This winter I will give you a correct answer of the humming of the bees in the cellar.

I have been keeping bees for 20 years. My husband made all the bee-hives and started me in the bee-business.

Iowa. CATHERINE WAINRIGHT.

Are you not making a mistake in not having a bee-book? If you have done so well without a book, might you not do enough better with it to pay the price of a book several times? Remember that a bee-paper is not intended to take the place of a bee-book, but to supplement it.

Queen Questions—Italian Bees.

The Bee Journal is a source of weekly pleasure to me, which I would not care to be without. I enjoy reading the Sisters' letters very much—they are interesting, having so many different experiences.

I now have 5 colonies, which are in a very flourishing condition. One is a pure Italian, and the other 4 a first cross, or half-bloods, I think.

I did not get very much honey the past summer, for I was anxious to build up and increase, but next year my bees ought to repay me, as I am in a good locality for them. Here in California the bees are wintered on the summer stands, and there are very few days, the year round, when they are not doing something. Nearly each month of winter there are some flowers blooming.

I should be glad to have these questions answered:

1. When a queen is superseded, can the bees rear as good a queen from her eggs as from eggs of a younger queen?

2. Are Italian drones always yellow, or are they sometimes black?

3. Would the journey from New York State to California shorten the life of a queen-bee?

4. Are Italian bees always yellow? and do the bands merge, or are they separated by a black band?

5. I bought two Italian queens (Doolittle's goldens); to one I gave young bees just hatching, and it built up into my most populous colony. The second one I introduced as per directions. Last month she died, leaving a young queen and a hive full of Italians behind her. Do you think the journey weakened her, or that she just simply failed, and the bees threw her out? I found her outside the hive, nearly dead, one day, but for about a fortnight both young and old queens were to be found upon one frame, living very peaceably together. Why did the bees nearly kill her and throw her out?

6. I have reared 3 queens from my choice Italian, and their bees have 3 bands, but are not as yellow as bees from the Italian queen. Would they be pure, or do you think them half-bloods? MARTHA WHITE.

Los Angeles Co., Calif., Nov. 23.

1. Just as good, if the queen superseded is as good stock as the younger queen.

2. They vary very much as to color, some being very dark.

3. Sometimes, and sometimes not.

4. The first three bands of the abdomen, beginning at the waist, are yellow.

5. It is very hard to say. For some reason she was superseded. Bees will sometimes supersede their queen when she is quite young, and evidently doing good work. Perhaps they are able to detect signs of failure before we can. It is not such a very unusual thing for the old queen to continue for some time laying in company with her successor.

6. The queens may be considered pure if their worker-bees have three yellow bands.

To Soften and Whiten the Hands.

The Ladies' Home Journal gives the following:

Sleep in gloves with the finger tips cut off, and use the following formula: Myrrh, one ounce; honey, four ounces; yellow wax, two ounces; rose-water, six ounces. These ingredients are mixed into a paste, the wax, rose-water and honey being heated over boiling water.

Contributed Articles

The Use of Drone and Queen Excluders.

BY C. P. DADANT.

We have of late been having much about queen and drone excluders between the brood-chamber and super; that the bees fill the brood-chamber and keep it full, and what they put above can be extracted without any danger of interfering with sufficient stores for winter, or at any other time. If this is the fact, I think it would be a good idea to get a supply of excluders for the coming year.

Tulare Co., Calif. A. B. CARPENTER.

The use or non-use of drone and queen excluders depends altogether upon the management of the apiary. We have kept drone-excluders for sale for years, but I am quite willing to say that it was not because we think they are to be recommended, but only because some customers think that they can not do without them. Personally, I have no use for the queen-excluders between the stories, neither do I think well of the drone-excluders at the hive-entrance. The drone-traps are not a new thing, though evidently those made now are superior to those used of old, but old Butler, in 1609, recommended what he called a "drone-pot," to keep the drones out of the hive after they had once emerged from it. L'Abbe Collin, in modern times, was probably the first to use perforated zinc between the stories. This was about the middle of the nineteenth century. Yet, the use of queen-excluders has not gone forward as much as that of other more practical implements.

If the queen has plenty of room for her brood in the lower story, previous to swarming, there will be no laying of eggs in the supers. The breeding in supers takes place mainly in very small hives—8-frame hives, or smaller—because a prolific queen finds herself cramped for room, and, of course, will seek all chances of depositing eggs. In large hives—those of 10 frames or more—the laying of eggs in the super takes place only in irregular seasons, when the flow is intermittent, so that combs are built, partly filled, and then partly emptied during bad weather, or a change in conditions. Those combs that have been fresh built, and emptied of the honey, are open to the queen, and she will find them readily if in search of additional room. It is, of course, unpleasant for the apiarist to see his nice sections spoiled in appearance by brood, for those combs in which brood has been reared, even but one time, are fit only for storage-combs, and not salable. But in a good season, when the flow is uninterrupted and strong, the bees fill the combs as fast as they are built, and the spaces left empty are scarce. The queen then remains over the brood and refills the brood-cells as fast as the young bees hatch.

In producing extracted honey by our method, with half-story combs above a large brood-chamber, the breeding in upper stories is very rare, and only, as I have said before, in irregular seasons, when quite a number of cells are left within reach of the queen. We found that even the placing of empty combs in the supers above the brood would not draw the queen above, if the thing was done in time, that is, before the combs below are too much crowded with honey. After one super is full of honey the other empty supers may be added above without much danger of the queen crossing over a half-story of *full* combs to hunt for cells. In all but exceptional instances the queen will not go far from the brood-center to lay. On the other hand, when the bees are run for extracted honey, it matters very little whether brood is hatched in the supers, provided the colony does not entirely desert the brood-combs to locate above. This happens sometimes, but the instances of this kind are so rare that I have never thought it worth while to bother with the excluders for the sake of avoiding it.

The greatest objection to the queen laying eggs in the supers when the colony is run for extracted honey, is that often drone-combs are located in the super. If the queen finds these, and she is tired of laying worker-eggs, we take it that it is a rest to her to lay in drone-cells, either because of the different positions in which her body is placed for laying, or because the fecundation of the eggs that are to hatch as workers gives her more fatigue than the laying of eggs that pass through the oviduct without coming in contact with the sperm-sac. At any rate, it is positive that there are times when the queen will seek drone-cells, and it is usually when she has been laying eggs regularly, and in large numbers for some time.

If every comb in the super has been built on comb foundation, there will be no more drone-comb in the upper story than in the lower, but this is not always the case. We used to save our drone-combs, those cut out of the brood-chamber, to place them in the extracting supers, and we had a great many such combs in use when we recognized the fact that it would have been cheaper, in the long run, to have rendered up these combs for wax, and used worker-combs in the entire hive, supers and all, owing to the queen's occasional use of the drone-combs. The combs are not a temporary investment; they are to the bee-keeper almost the equivalent of real estate to the farmer, for they need never be destroyed, and they increase in value and strength with age, so that extracting-combs that have been in use 30 years are really better than new ones. So the primary cost of these combs is insignificant when compared to their usefulness.

I am convinced that the laying of eggs in the super by queens does not depend altogether upon the more or less fertility of the queens, but depends mainly upon the conditions of the season, and my reason for believing this is, that there are seasons when not a single queen lays eggs in the upper story, while there are other seasons, rare ones, when perhaps one-fourth of the queens in an apiary will occupy the upper story with brood, if there is any room there at all. If this brood is layed in worker-cells in extracting-combs, there is no harm done, but if it is in drone-cells, we have lost a portion of our crop, for it takes a large amount of food to rear and sustain those worthless gormands for the ephemeral duration of their life.

Hancock Co., Ill.

The Premiums we offer are all well worth working for. Look at them.

Eucalyptus Honey—Dark vs. Light.

BY E. V. PAGAN.

"WHEREVER the famous eucalyptus will grow we should think that bee-keepers would aid in planting it. Its honey is delicious, of excellent flavor, thick in body, though rather dark in color." So says the Editor on page 757.

I am not going to dispute that eucalyptus honey is "delicious" to you, Mr. Editor. I have tasted several different samples of it that came from Australia, its native place, and I surely would not class it as delicious. Some of it might pass as tolerably fair in flavor, but I think the majority of persons would vote none of it better than that, and some of it as unfit for table use. For years the effort has been made to find a market for it in London, but the effort has not been a great success. Australians say it is excellent honey, but the people of England do not agree with them.

A very little of some kinds of eucalyptus honey would greatly damage any kind of light honey for my taste, and I suspect it would for the general public of this country, so that I should much dislike to have eucalyptus grow in my locality *if* it should yield at the same time with plants yielding the best white honey. It might, in some localities, prove an English sparrow among honey-plants.

COLOR OF HONEY.

On page 757, W. A. Pryal says: "I believe the time is not far off when color in honey will not cut much of a figure so long as the article is of good flavor. To my notion, some of the amber-colored honey I have tasted surpassed any of the so-called white honeys;" and the Editor adds: "Color in honey is now, and has been, a fad which we are certain will pass away like many another senseless fad."

Is not all of that said under a misconception? Does color, *in and of itself*, cut any great figure to-day? Suppose that all the white honeys were dark, and that all the dark honeys were light, and that they had always been so; do you think that water-white buckwheat honey, with its rank taste, would come any nearer to the price of alfalfa honey of a dark hue than does the present dark buckwheat to the white alfalfa? Buckwheat honey is lower in price now than alfalfa, not because it is darker, but because of the difference in flavor, and it so happens that most honey of light color happens to suit the taste of most people better than the generality of dark honey. In general, a lighter color is a sign of a better flavor, and, so long as that continues, the fad for light color will continue.

Since writing the foregoing, I asked a lady whether she preferred the dark or light color in honey. With some little hesitation she gave her preference to the dark color. It was the answer I expected, for I knew in advance that she preferred the *taste* of the dark. Very likely you will find that those who prefer buckwheat and the stronger-flavored honeys—and there are many of them—will all prefer the darker colors; and when the time comes that the majority of the people like the taste of dark better than light honey, then the fad will change—hardly till then.

[We are always glad to get sensible and honest criticism of what we may say in these columns. We hope, also, that we may never seem to convey the "know it all" impression in what we write. We don't know a great many things, and are learning all the time.

Now, after having written that paragraph, we want to say further that after a number of years of experience in the honey-business, dealing with thousands of grocers, the great majority are faddish enough to *think* that they *must* have light-colored honey. They care little for the flavor, only so it is light-colored.

As to the flavor of eucalyptus honey, we were not speaking of imported eucalyptus honey. Our sample came direct from California, and it was most excellent honey, in flavor, body, and color. There may be varieties of eucalpytus honey just as there are of alfalfa and other honeys.

We shouldn't be surprised if Mr. Pagan would some day be glad to have even eucalyptus honey rather than none at all. What bee-keepers need is a sure, annual yielder, for no matter what the color or flavor (so long as wholesome) may be, there will be a demand for it somewhere in this wide land of ours.—EDITOR.]

Doubling Up Colonies in the Fall.

BY T. F. BINGHAM.

THE doubling of my bees for reduction in numbers, referred to in the American Bee Journal, depended entirely upon circumstances, and not any peculiar adroitness of the operator.

To understand the operation, it is essential to know that my hive is 12½ inches square and 6½ inches deep, composed of 7 closed-end frames, held together by a wire loop or link at each end. From one to ten such "hives" are a hive, according to conditions. Of course, the doubling did not take place until all the brood was hatched, and the loose honey all concentrated, usually in the top of the hive, or collection of hives, as above. This clearing of those parts or frames after the brood is matured is the main feature of reduction of parts, as well as colonies of bees. The small, short frames in the lower parts or hives the bees clear entirely of honey, if there is room enough in the parts above to hold it. It will be readily understood that one or more of these hives of empty combs could be quickly removed, and the remaining top hives of honey and bees set on the same bottom-board.

This year the honey was short in all hives, and a pile that was full of bees and 5 feet high in July could now be reduced to two, or perhaps one such corresponding hive. This, you will readily see, made it easy to unite to two, and still keep the hive down to a wintering basis.

As I wished to select queens, hives not having well-marked Italian bees were selected for reduction, and the queen removed. I tried several periods of time after removal of the queen, and found one or two days for queenlessness was desirable before uniting, which was done by setting one colony on top of another, one of which was queenless. Even though colonies deprived of their queen showed confusion and evidence of queenlessness. It was found that in some instances a few bees were killed if only queenless a few hours. No brushing, or shaking, or smoke, was used when setting them together, to induce them to be kind to one another.

The small hives were readily taken apart, or out of the pile, and, as appearances usually indicated which of them contained the queen, the finding was readily accomplished.

My combs or hives are now piled up safely, ready for another season's operations, while the bees are in hives containing no more combs than required for safe wintering, and quietly biding their time in the cellar. A few of them were rather light in honey, and I have been feeding them 2½ pounds of sugar syrup once a week. They seem to like it, and settle down just as well as if out-doors. They were put into the cellar Nov. 10. The cellar showed 30 degrees, and was closed. The cellar now shows 40 degrees with one ventilator open. It might be a pleasure for some bee-keepers to know that all the bees any queen can as a rule rear, in ever so large hives, when the season is over, will cluster in a hive of empty combs one foot square and 6½ inches deep.

Miss Wilson's lady friends, who don't exactly like to lift 50 to 100 pounds, might get a pointer from my hive as above. I have none to sell, however.

Clare Co., Mich., Nov. 30.

Honey as a Health-Food is the name of a 16-page leaflet (3½x6 inches) which is designed to help increase the demand and sale of honey. The first part is devoted to a consideration of "Honey as Food," written by Dr. C. C. Miller. The last part contains "Honey-Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by every one who has honey for sale. It is almost certain to make good customers for honey. We know, for we are using it ourselves.

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Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, Ohio.

THAT TEXAS AVERAGE OF HONEY AND WAX.

As to that queer Texas yield of 12 pounds of honey and 41 pounds of wax per colony, I saw what the trouble was at the time, but thought best not to correct just then. Will not Prof. Sanderson, and all the rest, avoid a kind of statement so very liable to misunderstanding? Even if the printer doesn't go wrong and leave out the dot, half the readers will read wrongly. Very many of us are more or less rusty on mathematical kinks which we never use ourselves. If a single amount less than unity, or a few of them, are to be given, state them some other way. If figures must needs be used, don't be so stingy of them. Instead of .41 write 0.41, and mistakes by the reader will be cut down several hundred percent. Page 692.

HOW NOT TO LEARN ABOUT BEES.

The way *not to learn* about bees. (Apologies to A. I. Root.) Take every old farmer you can get at and pump him dry on the subject. My, what an amount of misinformation—and contradictory misinformation, at that—can be laid in by that method! Page 693.

LABORATORY FOUL BROOD AND PRACTICAL FOUL BROOD.

The bees are *unfriendly* to half-killed germs of foul brood, don't want to develop them, while the experimenter, of course, must be friendly. I think that circumstance accounts for most of the divergence between laboratory foul brood and practical foul-brood in the bee-yard. To get started in a vigorous colony of bees the germs must not only be alive, but lively. But don't you, on that account, do less than the best you can to keep *all* germs away! Page 696.

SHOOING INSTEAD OF SHOOTING HIGH SWARMS.

In my domain, page 698, read "shooing" instead of "shooting," to get down the lofty swarm. This is the worse, because, in default of anything else that seems practicable, actual shooting is sometimes indulged in.

SOME INTERESTING CALIFORNIA HISTORY.

Mr. Harbison's remarkable talk should hardly be passed over without gleaning a little. Honey at a dollar a pound, and bees at 100 dollars a colony, and business brisk in both directions! Must be pleasant to remember these old California times, as it is pleasant to us to hear about them. For one man, 3750 colonies in 12 apiaries is quite a lot. Apparently no one ever had time to figure up their biggest crop—only knowing it was a heap over 100,000 pounds of comb honey. (Biggest crop seems to have come when there were not nearly so many bees. 'Twould be only a matter of 30 pounds each for the maximum number.)

The point-blank contradictions of the human mind get a good illustration. "Nothing that bees could live on in California," was the verdict of many apparently intelligent men that had been there. Other men, who had been there, contradicted—and were right. Curious that the same thing had to be gone over again a few years later. "Nothing for bees to live on in *southern* California"—best bee-pasture in the State, if not in the world. Pages 709 to 711.

KEEPING A BINGHAM KNIFE CLEAN AND DRY.

Wonder if Bingham is right, that honey and water rusts the knife carelessly left in it much less than pure water. Quite imaginable. But don't you experiment in that line. The Bingham knife is a choice tool, and do you clean it up nicely every day—and dry it off lovingly with a nearly dry hand. Page 712.

CLEANING PROPOLIZED HANDS.

As to hot water versus cold water to clean propolized hands I'm going to split up again. Use both. Don't expect to accomplish a job of such magnitude without quite a bit of work, and intelligent work, too. Clench the smooth limb of a tree, and, twisting slightly, make that take off the first installment of the propolis. Then get the coldest water you can and wash with very decided emphasis—without any soap at first—then put on the soap and do so some more. Spots will still remain; scrape 'em well with the jackknife—and then another round of soap and cold water—and then a second scrape with the knife. Last of all, warm water and soap. Cold water makes propolis so brittle that it will powder up; while under hot water it just masses together. But when there's not much left but *stain*, then warm water and soap get ahead best. Any good soap fit for heroically dirty hands. My experiment with Lava soap didn't please me. Altogether too much *lather*; and too long afterward the fingers smelled and *tasted*. Alcohol and kerosene and vinegar, and probably lots of other chemicals, are good—for those who incline to like them—but the above racket, using no kept-a-purpose article, seems to me to be the "orthodox" way. Page 712.

NON-SWARMING IN LARGE APIARY BY CELL-CUTTING.

Yes, Sister Wilson, King Abimelech didn't like to have a woman slay him, but you and I can manage it. Glad to be slain (ought to be, whether I am or not), and know that large apiaries are actually taken through the season, with more or less of non-swarming success, by the process of cell-cutting. I honestly thought that was "book farming" except where the colonies were few. Page 713.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Don't "Drown" Queens for Introducing.

"A York County Bee-Keeper," in the Canadian Bee Journal, quotes one of my replies in this department as saying that in introducing a queen the queen is to be held under water till "nearly or entirely drowned," and he seems to think that if entirely drowned a queen would not be of great value. After consulting the dictionary, and making a careful search among my assortment of excuses, the only excuse I can find that fits the case is ignorance—pure, unadulterated ignorance. I was not familiar enough with the English language to know that when a person or thing was drowned that person or thing was dead, dead. I thought that upon being submerged in water, when it ceased to move it was drowned. I should have said to hold the queen under water till she nearly or entirely ceased to struggle. If my York County friend will continue to help me in gaining a knowledge of the English language, I'll promise never again to advise the drowning of a good queen. C. C. MILLER.

Wintering and Swarming in Tenement Hives—Hard Pine for Hives—Sweet Clover.

1. Will bees winter well in a double-wall tenement hive (4 in one)?
2. How can I prevent bees in a tenement hive from swarming? Can I make brush swarms?
3. Will hard pine do for hives, or will the smell of pitch harm the bees?
4. Is sweet clover a good honey-plant in this locality? If so, how much seed is required to sow an acre? What time of the year should it be sown? Where can I get it, and what is the price?

INDIANA.

ANSWERS.—1. Yes.

2. Yes, you can brush swarms in tenement hives, and the prevention of prime swarms is the same as prevention of prime swarms in other hives; but if one of the colonies can be moved only by moving the whole four, prevention of after-swarms will not be so easy as with colonies in separate hives.

3. I don't know, but I hardly think there would be a sufficiently strong odor of pitch to make trouble.

4. It is one of the best. About 10 pounds of seed will sow an acre. Sow when farmers in your vicinity sow red clover. You can get it from most dealers in bee-supplies, or from seed stores, at about 12 cents a pound.

Spraying Fruit-Trees—Rendering Wax—Domestic Goldenrod.

1. Is there a law against spraying fruit-trees when in blossom in New Jersey.
2. Late this fall I found eggs in a number of my hives, and thinking I would watch to see how late the bees would breed, I opened that hive a couple of weeks later, and found that every egg had disappeared. What became of the eggs, and is this a usual thing to happen?
3. Can you give a simple plan to render wax in small quantities, for one who does not care to get the implements usually used for that purpose?
4. Sometimes late in the fall, or early in the spring, when there is snow on the ground, there come warm days when the bees fly out, and many of them drop, and, getting chilled in the snow, never rise again, but die there. (I winter bees outside.) Would there be any objection to confining the bees in the hives on such days? If so, do you know of any remedy to prevent the loss of bees from this cause?
5. Can you inform me where to get seed of domestic goldenrod? It is very much like the wild goldenrod, except that it is much more fragrant, and clumps of flowers are larger and deeper.

PENNSYLVANIA.

ANSWERS.—1. I don't know; I think not.

2. You are a closer observer than the average. I think it is not an unusual thing for queens to lay after the workers have decided that they will rear no more brood. Likely the workers eat the eggs.

3. From "Forty Years Among the Bees," page 307, I quote: "An old dripping-pan (of course, a new one would do) had one corner split open, and that made the extractor. The dripping-pan is put into the oven of a cook-stove with the split corner projecting out. The opposite corner, the one farthest in the oven, is slightly raised by having a pebble, or something of the kind, under it, so that the melted wax will run outward. A dish set under catches the dripping wax, making the outfit complete. Of course, the material to be melted is put in the pan the same as in the solar extractor."

4. Better not fasten the bees in, but shade the entrance thoroughly with a broad board or screen of some kind, so as to prevent the entrance of the light.

5. No, I never heard of it before.

Splints for Foundation—Crossing Bees—Ventilating Hives.

1. Dr. Miller says he puts foundation on with splints 1-16 of an inch square. I would like to know where I can get the splints, as I have no tools to make them.
2. Is wire used when splints are used?
3. Do you keep them? If so, what is the price of them?
4. Most of the bee-keepers say that a cross between Italians and the common bees is better than either. What do you think of a cross between Italians and Carniolans, or a cross between Italians and Cyprians?
5. Do you ventilate hives at the top, when you unite on the summer stands?

VIRGINIA.

ANSWERS.—1. You can have them made at any manufactory where they have machinery for slicing, such as they use for slicing separators.

2. No wire is necessary.

3. No, I keep no supplies for sale. I do not remember the cost, but they are not expensive.

4. I have doubts about a cross of Italians and blacks being better than Italians. Some speak very highly of a cross between Italians and Carniolans; but I think the other cross is not so much in favor.

5. With some sort of packing—absorbents, as they are called—a very slight chance for upward ventilation is allowed.

Cutting Out Drone-Comb—Honey Granulating.

1. When is the best time to cut drone-comb out of the brood-chamber, all things considered?
2. Is a thin board fitted tight in a super, with a hole cut in it, and wire-cloth over it, and filled with cut straw or sawdust, safe winter protection?
3. Will pure clover honey, run out on a section, look like granulated sugar and sparkle by drying and by age? A neighbor gave me a section, with the name of the bee-keeper printed on it, that is partly covered with what appears to be sugar, from sugar syrup fed to bees. It looks like fine, granulated sugar, and sparkles, tasting like sugar. It is a question with me, and some other bee-keepers, whether or not honey will look like this with age.

NEW YORK.

ANSWERS.—1. That depends. Perhaps the best time in general is when a comb is empty and not in the care of the bees, so that you can put a patch of worker-comb in place of the drone-comb without interferring with the work of the bees. If the comb be in the care of the bees, then any time when the bees are actively at work.

2. I suppose you mean wire-cloth is over the hole. It will do with cut straw; sawdust might be a little solid. Planer shavings and dead leaves are good.

3. I don't know. It is just possible that honey might sometimes have that appearance.

What Trees to Plant.

I have read Prof. Cook's "Roadside Tree-Planting and Reforesting," on page 760. I would like to hear more on the subject of tree-planting. What trees are suitable for rocky hillsides, and along streams, etc.? also, trees that are suitable for a colder climate than California?

MISSOURI.

ANSWER.—Among honey-trees that might meet your desires are hard maple, soft or red maple, fruit-trees, tulip-tree (called also poplar and whitewood), locust and linden, or basswood.

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FROM MANY FIELDS

Great Year for Bees.

What success I have had in bee-keeping I attribute to the "old reliable" American Bee Journal

Last spring I had 2 colonies of bees, and some empty hives. I bought 3 swarms in May, where they had settled, for $1.00 each, and increased to 11.

It was a great year for honey here. After giving several preachers a lot, and all the neighbors some, and keeping enough for my own use, I sold 700 pounds at 12½ cents a pound. It was all in pound sections. As soon as I take it off, I take it to the cellar and leave the door just a little open, so the bees will come out. Then it is not spoiled with too much smoke.

In the summer I put a box that is about 8 inches deep over each hive, for a shade, laying 2 pieces of board, one inch thick, across the hive, so there will be an air-space.

Bee-keeping is a side-issue with me, but I like it very much. C. W. BAKER, M. D.

Harrison Co., Mo., Nov. 27.

Queen Laying in Queen-Cells.

On page 766, just received to-day, I notice a little comment by Delos Wood on Mr. A. C. F. Bartz's article on queen-rearing, where he asks anyone who ever saw a queen lay eggs in a queen-cell to hold up his hands. Mine are up, and if I had 3 different queens yet alive, I have owned, I could very quickly make Mr. Delos Wood hold up his hands. One queen kept me supplied for over two months with eggs, and many are the times I have seen her back up into queen-cups, and when she crawled out I found an egg in the cell. I used to put in sticks of cell-cups for her every few days, and, when filled with eggs and young larvæ, removed to other hives for maturing. All such queens I used were old and were trying to supersede, but I saw a year-old queen backed in a natural cup just as I lifted the comb. They were making preparations to swarm.

I used to be of the same opinion as Mr. Wood, but I must believe my eyes. I also saw 7 worker-bees backed in a comb as far as their wings would let them at one time, and after killing these 7, I soon killed 23 more that were backed in the same comb. So, I came to the conclusion that laying workers are unlimited in number when they get started. I further believe that worker bees do not put eggs in a cell any other way than by laying

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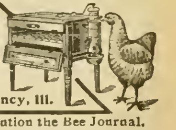

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in there, but I do not know; but I also do not believe Mr. Wood ever saw a worker-bee take an egg from one cell deposited by a queen and carry it to another cell and place the same egg in it, and see it develop into a worker or a queen.

Mr. Bartz's plan would not work, of course, but if you have an old queen that wants to supersede, just get a lot of natural cups and stick with hot wax to the upper side of a horizontal slit in a comb in the center of the hive, and destroy all other queen-cell cups in the hive, and if she is at the right stage of supersedure, in a couple of days you will have a nice lot of queens in them, which, after they hatch and are being fed, can be removed, and process repeated as long as the queen lives, or as you desire; and if you follow that up with several nice, gentle queens, week after week, and year after year, as I have done, you will surely see more than one queen backed in the cells; and if your queens are of properly selected stock, as they should be, you will soon have a lot of bees that will surprise you in what they can do. Let every queen be reared from the best mother, and so on for many years, and you will have no poor drones to mate your choice queens.

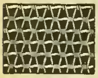
I have an apiary in San Bernardino Co., Calif., and I believe if Mr. Wood will come over to see me next summer, I can show him some proof of what I have said.

THOS. CHANTRY.

Davison Co., S. Dak., Nov. 28.

Poor Season for Bees.

The past season was rather poor for this locality. White clover was very plentiful, but the weather was so cold that several colonies at my out-yard died of starvation after the fields were white with clover. The bees did not commence storing surplus until near the last of June, and then the flow lasted only two weeks. I never saw so much swarming, and not a swarm stored any surplus, and all of those that were not hived on full combs had to be fed for winter. Our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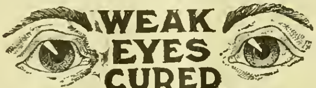
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The Bee-Keepers' Review for November describes a Bottom-Board that costs **absolutely nothing**. This may seem strange, but it is strictly true.

This same issue also describes a Cover that will neither warp, wind, split, nor twist, yet it can be made for five cents.

Another interesting feature of this issue is the description of a cheap but novel method of supporting brood-frames, in which the point of contact is so small that gluing of them fast is almost impossible—they can always be picked up with the fingers with no prying loose.

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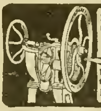

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main honey-flow is generally from fall flowers. I never saw so many flowers in my life as there was this year, but it was too cold and wet for the bees.

A great many young colonies have already starved. I put my bees in the cellar last week; there were 155 colonies in rather poor condition. H. H. PORTER.

Sauk Co., Wis., Dec. 1.

From An Old Reader.

I have taken the Bee Journal nearly 30 years. I have owned bees over 35 years, and have sold a great many tons of honey, all of my own producing, the most in any one year being 3 tons. I have on hand from 1000 to 1200 pounds of honey, some light, some buckwheat, and all in one-pound sections. I have 130 colonies of bees to keep through the winter.

I shall be 71 years old Jan. 11. Well do I remember Mr. Newman, the former editor of the American Bee Journal, that so lately passed way. Not to underrate Mr. Newman, I will say that the Journal has taken quite an advance step since he left it.

C. ALEXANDER.

Onondaga Co., N. Y., Nov. 28.

Good Year for Bees.

This has been a good year for the bees with me. I have 23 colonies, and got 1500 sections of comb honey, and 30 gallons of extracted honey. EDGAR EASTMAN.

Buena Vista Co., Iowa, Nov. 30.

Bees Did Well.

I have 10 colonies of bees, and they did well this season. On account of the dry, cool weather they did not swarm very much—4 swarms out of 10 colonies, and 2 of them out of one. I think the bees will do well here in a short time. G. W. MOURN.

Harvey Co., Kans., Nov. 27.

Goldenrod and Asters in Illinois.

An editorial says, "Surely goldenrod and asters should have some bacterium in Illinois." Asters are of the composite family, and do not require any bacteria. Only plants of the legume family require bacteria. There are about 100,000 species of flowering plants, 6500 species of the legumes. All the clovers, all the peas, beans, vetches, lupines, etc., belong to the legumes; also the sensitive plant and the locust trees belong to this family.

I think we do not get goldenrod honey in Illinois, because we do not have enough of the right kinds. Here we have only two kinds that I know of. In the East they have 20 or more kinds; some kinds probably produce honey better than others. J. E. JOHNSON.

Knox Co., Ill., Nov. 25.

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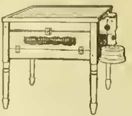

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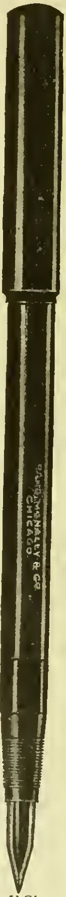

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Beedom Boiled Down

Future of Sweet Clover.

It has pained me to see the way in which many of the agricultural papers have talked about sweet clover, especially in answering inquiries. Here is something from the Country Gentleman, however, from John Chamberlain, that is a fair recognition of its true value:

"I never see a swampy growth of sweet clover that a man could fairly get lost in, as he would in a Southern canebrake, without wondering why some one has not taken it up and made it a leader in hay-producing plants. As we see it, only one crop is produced; but where it happens to be cut down before seeding, and before the main stem becomes woody, it springs up again at once and covers the ground with the most succulent growth imaginable, and always quite indifferent to dry or wet weather. Some day we shall appreciate sweet clover."

The writer of the above item does not say outright that it will be eaten with the greatest avidity by almost all kinds of stock when they once create an appetite for it, but he seems to take it for granted it is of value. None of the clovers can be classed as noxious weeds. Of course, even rank red clover in a strawberry patch might be called a weed; and sweet clover has perhaps created the impression that it is a weed because it grows luxuriantly, even on the hardest ground by the roadside, where red clover would not grow at all. It is really one of the hardiest and most valuable of the clovers.—A. I. ROOT, in Gleanings in Bee-Culture,

Tiering-Up Supers.

Tiering up by adding the new super above the old one has been discussed of late, in a way that shows misconception of the idea. It is not always to put the new super on top, no matter how many supers are under, but always to have the new super just over the one that is approaching completion—not over the one that is just receiving the finishing touches. The latter should always be on top. If it would thus receive less attention than it should, there are too many supers on the hive. In other words, a super should be nearly completed when next to the brood-chamber, but when that point is reached, should change places with the new super, which has been added some time previously on top.

Many times this season I noticed that putting the new super next the frames too soon resulted in neglect of the outside sections of the super approaching completion, to work the center sections of the new super. The flow was too slow for the bees to work willingly at the sides when they had plenty of room given directly overhead and next to the frames. Putting the new super above the old one for a time corrected this tendency. The center sections of the new one would be worked some, but not at the expense of the old super, as happened by the plan of tiering underneath.—F. L. THOMPSON, in the Progressive Bee-Keeper

Errors in the National Report.

Referring to his talk given at the Los Angeles convention, Mr. A. I. Root makes these corrections in his paper, which we are glad to reprint:

On page 694, Mr. Samuel Wagner is credited with making the first machine with rollers for making comb foundation. Instead of giving Wagner the credit it should have been *Washburn*. Mr. Alva Washburn, of Medina, Ohio, made the first pair of rolls the world ever saw, for rolling out comb foundation. He did this while working for me by the day; but, notwithstanding, the credit is due to him more than to anybody else, for having carried the operation through its ex-

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Bee-Keeper's Guide, or Manual of the Apiary, by Prof. A. J. Cook, of Pomona College, California. This book is not only instructive and helpful as a guide in bee-keeping, but is interesting and thoroughly practical and scientific. It contains a full delineation of the anatomy and physiology of bees. 544 pages. 295 illustrations. Bound in cloth. 19th thousand. Price, $1.20.

Langstroth on the Honey-Bee, revised by Dadant.—This classic in bee-culture has been entirely re-written, and is fully illustrated. It treats of everything relating to bees and bee-keeping. No apiarian library is complete without this standard work by Rev. L. L. Langstroth—the Father of American Bee-Culture. It has 520 pages, bound in cloth. Price, $1.20.

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Scientific Queen-Rearing, as Practically Applied, by G. M. Doolittle.—A method by which the very best of queen-bees are reared in perfect accord with Nature's way. Bound in cloth and illustrated. Price, $1.00; in leatherette binding, 60 cents.

Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—It is nicely illustrated, contains 160 pages. Price, in cloth, 75 cents; in paper, 50 cents.

Advanced Bee-Culture, Its Methods and Management, by W. Z. Hutchinson.—The author of this work is a practical and entertaining writer. You should read his book; 90 pages; bound in paper, and illustrated. Price, 50 cents.

Bienen-Kultur, by Thomas G. Newman.—This is a German translation of the principal portion of the book called "Bees and Honey." 100-page pamphlet. Price, 25 cents.

Apiary Register, by Thomas G. Newman.—Devotes two pages to a colony. Leather binding. Price, for 50 colonies, $1.00.

Dr. Howard's Book on Foul Brood.—Gives the McEvoy Treatment and reviews the experiments of others. Price, 25 cents.

Winter Problem in Bee-Keeping, by G. R. Pierce.—Result of 25 years' experience Price, 30 cents.

Foul Brood Treatment, by Prof. F. R. Cheshire.—Its Cause and Prevention. 10 cts.

Foul Brood, by A. R. Kohnke.—Origin, Development and Cure. Price, 10 cents.

perimental stage, and making it a practical success.

On the same page we are told that our good friend, T. F. Bingham, of smoker fame, has "hives of his own." It should read, "a *hive* of his own." It would seem very strange if an old bee-keeper like friend Bingham did not have some "hives," more or less, of his own.

On the same page, lower down, we are told the daily papers spoke about a "Quaker chap down in Ohio." The word *Quaker* should be *queer*. I have always been more or less *queer* to the outside world, but I have never been a Quaker.

On the next page we read, "The sorrow that covers a man's grave is oftentimes the poultice that draws out his virtues." The word *sorrow* should be *sod*. I used the old proverb in speaking of the death of Thomas G. Newman.

Italians as Winterers.

In Gleanings in Bee-Culture G. M. Doolittle, in reply to the question whether Italians stand the cold winters in 43 degrees north latitude as well as the German or black bees, says:

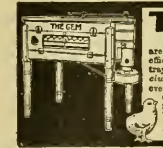
"It is said by some that they do not; and I used to believe that the black or German bee was the hardier; but that was before I made any careful test in the matter. Some 25 years ago I began to look carefully into the matter of wintering; and during the experience of all these years since, I have become convinced that there is little if any difference in favor of either along this line. Some winters the blacks seem to do better; in others, the Italians come out ahead."

CONVENTION NOTICES.

Pennsylvania.—All bee-keepers in the State of Pennsylvania interested in forming a thorough State organization, are requested to correspond with the undersigned.
Swarthmore, Pa. E. L. PRATT.

Kansas.—The first regular meeting of the Kansas State Bee-Keepers' Association will be held at Topeka, Dec. 30. All persons interested in bees, whether members or not, are urged to be present. O. A. KEENE, Sec.
Topeka, Kan.

New York.—The Fulton and Montgomery Counties Bee-Keepers' Society will meet at the Central Hotel, Market Street, Amsterdam, N.Y., on Tuesday, Dec. 22, 1903, at 10 a.m. This will be the regular business meeting of the Society for electing officers, payment of annual dues, and any other business which may come before this meeting. Annual dues, $1.00, which also includes a membership in the State and National Associations. T. I. DUGDALE, Sec.
F. P. JANSEN, Pres.



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HONEY AND BEESWAX
MARKET QUOTATIONS

CHICAGO, Dec. 7.—At this season of the year there is not much trade in honey, retailers having laid in their stock for the holidays. Fancy comb honey for the Christmas trade has brought 13½c; No. 1 grades, 12½@13c; amber, 9@10c. Extracted, white, brings 6@7c; amber, 5@6c. All extracted honey is sold on its flavor, quality, kind and style of package. Beeswax, 28@30c. R. A. BURNETT & Co.

PHILADELPHIA, Dec. 10.—Large lots of comb honey being offered from States that were not supposed to have much stock. Bee-men, as usual, wake up now to the fact that they want to sell their comb honey and push it on the market, thus breaking the price. If they would only offer their honey in September, they would get more for it and it would be better for the producer and dealer. We quote fancy white, 14@16c; No. 1, 12@14c; buckwheat, 12c. Fancy extracted, 8c; amber, 6@7c. We are producers of honey, and do not handle on commission.
WM. A. SELSER.

ALBANY, N. Y., Nov. 27.—Honey market some lower since the cold weather and Thanksgiving demand over. We quote: Fancy white, 15c; No. 1, 14@14½c; buckwheat and mixed, 13c. Extracted, steady and quiet; buckwheat, 6½c; clover, 7c; mixed and amber, 6@6½c. Beeswax, 28@30c. H. R. WRIGHT.

CINCINNATI, Nov. 20.—The demand for comb honey is slower now than it was six weeks ago, owing to the enormous quantities offered on all sides. Fancy comb is sold in single case lots at 14c. The supply of extracted honey is big, although the demand is good. We are selling amber extracted in barrels at 5¾@6½c. White clover, in barrels and cans, 7½@8½c, according to quality. Beeswax, 30c.
THE FRED W. MUTH CO.

BUFFALO, N. Y., Oct. 11.—The demand for white comb honey is better than it was. The trade is particular and wants only very white, clean stock. If the wax is yellow from travel-stain it does not sell well, and price has to be cut. Fancy white comb, 14@15c; A No. 1, 13½@14c; No. 1, 13@13½c; No. 2, 12@12½c; No. 3, 11@12c; No. 1 dark comb, 11@12c; No. 2, 10@11c. White extracted, 6½@7c; amber, 6@6½c; dark, 5½@6c. Beeswax, 28@30c.
W. C. TOWNSEND.

BOSTON, Nov. 25.—Western honey is arriving more freely in our State, causing a slight drop in prices. Fancy No. 1, in cartons, brings 17c; A No. 1, 16c; No. 1, 15c. Extracted, white, 8½c; light amber, 7@7½c; amber, 6@7c, according to quality. BLAKE, SCOTT & LEE.

KANSAS CITY, Dec. 5—Receipts of comb honey larger; demand fair; prices easier. We quote fancy 24-section cases, $2.75@$2.85; No. 1, $2.75; No. 2, $2.65. Extracted, white, 7@7½c per lb.; amber, 6@6½c. Beeswax, 25@30c.
C. C. CLEMONS & CO.

CINCINNATI, Dec. 7.—The market on comb honey has weakened, as the supply has been larger than the demand. Quote fancy water-white at 14c; off grades, lower. Extracted I quote as follows: Amber, in barrels, 5¼@5¾c; 60 lb. cans bring ½c more; alfalfa, water-white, 6@6½c; fancy white clover, 7@8c. Beeswax, good demand; 30c for nice. C. H. W. WEBER.

NEW YORK, Dec. 4.—Comb honey is arriving in sufficient quantities to supply the demand, and, as to the quality, most of the white honey seems to be off color, more or less. We quote fancy white at 14c; No. 1 at 13c; amber, 11@12c; and buckwheat, 10c. Extracted, light amber, at 6c; white, 6½c; Southern, 55@60c per gallon; buckwheat, 5½c. Beeswax, 28@29c.
HILDRETH & SEGELKEN.

SAN FRANCISCO, Oct. 21.—White comb, 1-lb. frames, 13@14 cents; amber, 9@11c. Extracted, white, 5¾@6¼c; light amber, 5@5½c; amber, 4½@5c; dark amber, 4@4½c. Beeswax, good to choice, light, 27½@29c; dark, 25@26c.

Market is more quiet than for several weeks preceding, but is fairly steady as to value. Spot stocks and offerings of both comb and extracted are mainly of amber grades, while most urgent inquiry is principally for water-white, the latter being the only kind meeting with much competitive bidding from buyers. Recent arrivals of honey included a lot of 121 cases from the Hawaiian Islands. The bees of the Islands feed mainly on sugar.

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Langstroth on the Honey-Bee—Revised,
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BEESWAX WANTED at all times.

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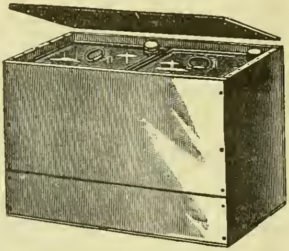
Extracted Honey For Sale!

ALL IN 60-POUND TIN CANS.



Alfalfa Honey

This is the famous White Extracted Honey gathered in the great Alfalfa regions of the Central West. It is a splendid honey, and nearly everybody who cares to eat honey at all can't get enough of the Alfalfa extracted.

Basswood Honey

This is the well-known light-colored honey gathered from the rich, nectar-laden basswood blossoms. It has a stronger flavor than Alfalfa, and is preferred by those who like a distinct flavor in their honey.

Our honey is put up in tin cans holding 60 pounds of honey each. These cans are shipped in wooden-boxes, and should arrive safely. We have nothing but PURE BEES' HONEY to offer, and so guarantee it. **Cash must accompany each order.** All prices are f.o.b. Chicago.

Prices of Alfalfa Honey:

One 60-lb. Can @8c	$ 4.80
Two 60-lb. Cans (in 1 box) @7½c	9.00

(Larger quantities at the 7½c price.)

Prices of Basswood Honey:

One 60-lb. Can @9c	$ 5.40
Two 60-lb. Cans (in 1 box) @8c....	9.60

(Larger quantities at the 8c price.)

A sample of either Alfalfa or Basswood honey will be mailed on receipt of 10 cents; samples of both kinds for 16 cents. (Stamps accepted.)

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HONEY-JARS—Don't forget to get our prices on all sorts of honey-packages.

THE A. I. ROOT COMPANY,
Successors to GEORGE W. YORK & CO.,
144 East Erie Street, - CHICAGO, ILL

AMERICAN BEE JOURNAL

Published Weekly by GEORGE W. YORK & CO., 144 & 146 E. Erie Street.

43d Year. CHICAGO, ILL., DEC. 24, 1903. No. 52.

WEEKLY

GUS DITTMER—(See page 821.

THE AMERICAN BEE JOURNAL

PUBLISHED WEEKLY BY
GEORGE W. YORK & COMPANY
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EDITOR,
GEORGE W. YORK.

DEPT. EDITORS,
DR. C. C. MILLER, E. E. HASTY, EMMA M. WILSON

IMPORTANT NOTICES.

The Subscription Price of this Journal is $1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

The Wrapper-Label Date of this paper indicates the end of the month to which your subscription is paid. For instance, "dec03" on your label shows that it is paid to the end of December, 1903.

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National Bee-Keepers' Association

Objects of the Association:

1st.—To promote the interests of its members.
2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

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Send dues to Treasurer.

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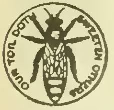
A Celluloid Queen-Button is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-lapel. It often serves to introduce the subject of honey, and frequently leads to a sale.


OUR TOIL DOTH SWEETEN OTHERS

The picture shown herewith is a reproduction of a motto queen-button that we are furnishing to bee-keepers. It has a pin on the underside to fasten it. Price, by mail, 6 cents; two for 10c; or 6 for 25 cents. Send all orders to the office of the American Bee Journal.

Some Good Clubbing Offers.

As this is the time of year when most subscribers renew their subscriptions, we wish to call special attention to the following, which we are sure will commend themselves to all:

No. 1—	The Bee Journal and Dr. Miller's "Forty Years Among the Bees" (book alone, $1.00)................	Both for $1.75
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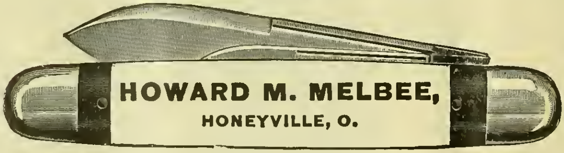
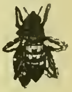
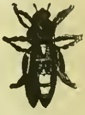
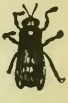
The Novelty Pocket-Knife.

Your Name and Address on one side—Three Bees on the other side.









[THIS CUT IS THE FULL SIZE OF THE KNIFE.]

Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the subscriber, and on the other side pictures of a Queen, Drone, and Worker, as shown here.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a last-time, with proper usage.

Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the "Novelty" is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the "Novelties," your POCKET-KNIFE will serve as an identifier; and in case of death, your relatives will at once be notified of the accident.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid for $1.25, or give it as a Premium to the one sending us THREE NEW SUBSCRIBERS to the Bee Journal (with $3.00.) We will club the Novelty Knife and the Bee Journal for one year, both for $2.00.

GEORGE W. YORK & CO. Chicago, Ill

☞ Please allow about two weeks for your knife order to be filled.

ESTABLISHT IN 1861
AMERICAN
BEE JOURNAL
THE OLDEST BEE-PAPER IN AMERICA

43d YEAR. CHICAGO, ILL., DEC. 24, 1903. No. 52.

Editorial Comments

The Merriest Christmas of All!

This is our wish to each one of the readers of the old American Bee Journal. May the gifts received and bestowed at this merry Christmas tide cause tender and loving thoughts in the hearts of both giver and recipient. It is the time of all the year when joy and happiness should prevail everywhere. That they may be in large measure in every home where goes the American Bee Journal, is also our earnest wish.

Sections Filled With Foundation.

In a work under review, the British Bee Journal objects to the phrase, "sections filled with foundation," and thinks "filled" is a misprint for "fitted." On this side it is common to speak of sections filled with foundation, when, instead of a small starter of foundation, the section contains as much foundation as it is practicable to put in. Will our British cousin tell us how the same thing is expressed over there?

Self-Hiving of Swarms.

A case of self-hiving is reported in Gleanings in Bee-Culture by G. W. Strangways. A colony with a clipped queen was placed on a stand about 18 inches high. An old hive made ready for the expected swarm was, by chance, left on the ground in front of the colony. One day it was discovered that this old hive was occupied, a swarm having issued and entered with its clipped queen without any one to witness the proceedings.

Keep Your Colonies Strong.

This, called Oettl's Golden Rule, was considered so important by Father Langstroth, that in the closing words of his classic work, the following words are found:

> "The essence of all profitable bee-keeping is contained in Oettl's Golden Rule: KEEP YOUR COLONIES STRONG."

Latterly, considerable emphasis has been put upon the importance of knowing thoroughly one's honey-resources so as to have colonies strong at just the right time, without having a lot of useless consumers when there is nothing for them to do. In other words, Oettl's rule would be modified to read: Keep your colonies as strong as possible when there is work in the fields, and keep down unnecessary numbers at other times.

There is good sense on the side of this modification—theoretically, at least—for what good can it do to have an immense number of bees in a hive at a time when they have nothing to do but diminish the amount of stores in the larder? But is it a thing to be put in practice universally? Can one always know in advance just when numbers will be needed? In localities where there are frequent and rapid changes in the amount of nectar to be had, is it possible to make the frequent and rapid changes so as to have the number of fielders always correspond with the amount of the nectar offered?

So far from this being the case with S. E. Miller, he thinks the rule with him should be: Keep your colonies *always* strong. No doubt the reasons that make this rule applicable with him make it equally appropriate for a good many others; and he gives thus his reasons in the Progressive Bee-Keeper:

> I want them strong early in the season, so that they may be able to build up strong during fruit-bloom, so that they will be ready for the white clover bloom. During the white clover bloom I want to keep them strong, so that if there is a surplus to be gathered during the latter part of July and early August, they will be early for it. I want them strong about Aug. 1st to Aug. 15th, so that they will be ready for the autumn flow, which commences about Aug. 20th, or later; and I want them stronger when they go into the winter, for it is a well known fact that strong colonies consume proportionately less quantities of stores than do weak colonies. Then, I want them strong early in the spring for the reason stated above, so that in my locality there is seldom a time that worker-bees will certainly become useless consumers, and should there be such a time I can not be sure that it is coming, in advance of its coming. Therefore, the rule with me must be, *Colonies always strong.*

Mr. Miller is broad-minded enough, however, to admit that what is true with him may not be equally true with others, and wisely adds:

> From what I have said above, it is evident that no bee-keeper can be too well informed as to the resources of his own particular location.

Staples for Fastening Hive-Bodies, Etc.

These seem to be coming into quite general use for fastening hive-bottoms and hive-bodies together, or for any other use where it is at times desirable to take away the fastening. The usual size of these staples is 1½ inches wide with points ¾ inch long. It is a question of some importance whether this is the best size. Would there be an advantage in having staples of larger dimensions? Would there be any greater security in a staple 2 inches wide? There is little question that points more than ¾ inch would hold more securely. Such a staple will hold quite well if it be driven in full depth; but if driven in full depth it is hard to draw the staple afterward. If driven in to such a depth that something can easily be slipped in to draw it, it may sometimes happen that the staple will be loosened by the shaking on the wagon in going to or from the out-apiary, especially if the staples be new and smooth. What is the experience of our constituency? What is the best size for staples?

Organizing Local Bee-Keepers' Associations.

We are often asked about starting a bee-keepers' association—how to go about it. The same question was brought up at the recent meeting of the Chicago-Northwestern convention. Perhaps a few words outlining the manner in which this flourishing association was started might be of interest, and also be a help to others who contemplate a similar movement.

In the first place, we published a call in the bee-papers for a meeting of all interested in bees, to be held at a certain place, and at a stated time. If we were in a country town, we would put such a call or notice in the local newspapers.

Then, on the appointed day, the thing to do is to get together and organize by electing a chairman or president, a vice-president, a secretary, and a treasurer. Sometimes the last two offices are combined, making one person the secretary-treasurer.

In the absence of any special program, the best plan is to pass slips of blank paper around, and ask each one to write any question he may desire to have answered. Then the question slips are to be gathered up, and the president read each one, giving ample time, however, for a full reply by all who desire to take part in the discussion

After finishing the first lot of questions, pass around more slips of paper for questions, and so on until it is time to adjourn. This plan really makes the best convention. Very much depends, however, upon the president, whether the question program is a success or not.

For best results, we believe that no bee-keepers' convention should be held oftener than once a year. The bee-keepers in and around Chicago tried meeting twice a year, but it seemed to be a failure. The fall of the year is the best time, say the latter part of November and in December. Of course, there may be exceptional cases where two meetings a year are successful, but we believe in the majority of cases the annual meetings are best.

Driving Bees.

This is an important feature of bee-shows in England, prizes being offered for driving in the shortest time. Yet some are beginning to raise the question whether driving bees should not now be considered a thing of the past. From one point of view it seems a pity to have it discontinued in public exhibitions, as there are in England some who are very expert at it.

Very likely some, if not many, of the readers of these pages will ask, "What do you mean by 'driving bees,' anyhow?" It means the driving of bees from box-hives into movable-frame hives, and would, perhaps, be better understood by the term "transferring." Yet among the younger members of the craft, in this country, are many who have never seen the process of driving or transferring, for the very good reason that there are no opportunities for the performance, all the bees in their localities being already in hives with movable combs. Localities, however, may still be found in this country where the box-hive is yet in fashion.

The Life of Bees.

A fresh contribution to the subject is given by D. M. M., a prominent correspondent of the British Bee Journal. To a colony of black bees he gave an Italian queen June 6, liberating her June 7. Eggs were seen June 11. July 22, 50 percent of the bees were Italians; July 25, 75 percent; July 29, 90 percent. A few blacks were still seen Aug. 1, and all had disappeared Aug. 6. D. M. M. comments thus:

> "It was marvellous to see how rapidly the blacks disappeared, especially during the last fortnight, when the decrease in numbers was something extraordinary. I calculated that, when the queen was inserted on June 6, the colony numbered 30,000 blacks; yet in 60 days they had all died out, showing an average mortality of about 500 bees per day. In the earlier weeks it was much less so; in the later ones it must have been very considerably greater."

If we assume that the black queen was removed June 6, that makes 61 days as the life of her latest descendant, supposing it died Aug. 6. That is much more than the six weeks generally accepted as the average life of a worker in the busy season. It is not fair, however, to take the latest survivor as a proper example of average longevity. Yet figure as we may, the data give no fair support to the belief that six weeks, or 42 days, is the average length of life. Six weeks from June 6 would give us July 18, when, according to the six-weeks rule, all the blacks should have disappeared, barring a few persistent hangers-on. But July 18 more than half the bees were still blacks. Even if we take July 29 as the time of the demise of the latest-born blacks, a time when a tenth of the blacks were still present, that will give us not less than 53 days as their lifetime.

Were these bees possessed of unusual longevity, or do our figures as to the lifetime of a worker, in the busy season, need overhauling? Perhaps this is a matter that should be taken up by the experiment stations.

Honey as a Health-Food is the name of a 16-page leaflet (3½x6 inches) which is designed to help increase the demand and sale of honey. The first part is devoted to a consideration of "Honey as Food," written by Dr. C. C. Miller. The last part contains "Honey-Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by every one who has honey for sale. It is almost certain to make good customers for honey. We know, for we are using it ourselves.

PRICES, prepaid—Sample copy free; 10 for 20 cts.; 25 for 40 cts.; 50 for 70 cts.; 100 for $1.25; 250 for $2.25; 500 for $4.00; 1000 for $7.50. Your business card printed free at the bottom of the front page, on all orders for 100 or more copies. Send all orders to the Bee Journal office.

The Premiums we offer are all well worth working for. Look at them.

Miscellaneous Items

Mr. J. H. Kallmeyer, of Wilson Co., Tex., has been strolling around in Southern California lately.

* * *

Mr. Geo. W. Riker, of Lucas Co., Iowa, reports his crop of extracted honey for 1903 as 40,000 pounds from 300 colonies. Nothing small about that, surely.

* * *

Mr. John M. Hooker, a former prominent English bee-keeper, has been visiting Southern California recently. He seemed to be very much interested in their method of bee-keeping, and while there visited the apiaries nearest the city of Los Angeles, taking some snap shots with his eyes and camera.

* * *

Mr. W. T. Richardson, one of Southern California's best and most prominent apiarist for years past, has disposed of his three apiaries of 900 colonies, located in the Simi valley, and has gone East to reside. It is hoped that the change will result in his complete restoration to health, and his return to California.

* * *

The Honey Crop in the region of Lake Windemere, England, is very small this year, so it is reported. "The wet weather of the past summer has not agreed especially well with the Italian stock that has been introduced into that country." Wet weather seems to work disastrously in at least two ways to the bee-keeper. It prevents the flowers from yielding nectar, and also keeps the bees in the hives.

* * *

Prof. Cook a National Director.—A leading California bee-keeper wrote us as follows last week:

> "As there will be several vacancies on the Board of Directors of the National Bee-Keepers' Association the coming year, I desire to suggest the name of Prof. A. J. Cook as one who would represent all sections."

Prof. Cook would be a strong member of the Board. He is greatly in favor of co-operation among bee-keepers, too.

* * *

Father Wm. R. Graham, of Hunt Co., Tex., passed away Nov. 27, 1903. He was the pioneer bee-keeper of his State. Dr. Wm. R. Howard, when sending us a picture and sketch of Mr. Graham, said of him:

> "I first became acquainted with Mr. Graham and family in 1876. We were like brothers from our first meeting. No man was held in higher esteem by all who knew him. He was devoted to his friends, and their success was to him a joy which he could not suppress."

A little later on we will publish Mr. Graham's excellent picture and biographical sketch.

* * *

Southern California Still Dry.—A prominent Southern California bee-keeper wrote us Dec. 9:

> "I note that W. A. Pryal is in great glee over the honey prospects in his section of the State, as the result of a copious rainfall. His intimation that the southern portion of the State has also been favored is a mistake, as we have had only a sprinkle of rain thus far, with the consequent result of many long-drawn faces among the bee-keepers of Southern California. Early rains, though, as a rule, are not of much benefit to the bee-keepers, and as our heavy fall usually takes place during the months of January, February and March, it is yet too early to predict a dry year for this section of the State."

* * *

Bee-Tree the Property of the Land-Owner.—Mr. Edwin Bevins, of Decatur Co., Iowa, sends us the following clipping:

> OSKALOOSA, IOWA, Oct. 29.—The boys who cut down Henry Brandt's bee-tree and took down the honey have to pay for same. Judgment against two of the boys, Joe Holdsworth and Joe Griffith, was rendered in the sum of $20 and costs, amounting to 36.59, making a total of $56.59 to be paid by the boys.
>
> The case was brought by Henry Brandt, owner of the bee-tree. He sued for the sum of $60. The boys located a bee-tree on the premises of the plaintiff. They cut it down and appropriated the honey. The plaintiff caused the arrest of the boys, and sought to recover the price of the property. He claimed that between 200 and 300 pounds of honey had been taken, and bees destroyed. In the adjudication of the case, the value of the tree cut down was estimated at $5.00, the corn destroyed by tramping $1.00, value of two swarms of bees, $5.00, and the value of the honey taken $11—making a total of $20. The

question of the ownership of wild bees was argued carefully. The defense claimed that the bees were the same as wild animals, and were open property, but the court did not find judgment in accordance with this theory.

Boys who destroy property and steal must expect to pay for it when caught. Perhaps if they had gone to the owner and proposed to divide up the honey, in case any was found in the tree, he would have consented to cutting down the tree, and possibly might have helped in the work. Of course, in view of the way it ended, it would have been much cheaper and easier for the boys to have gone to some bee-keeper and paid him a good price for 200 pounds of honey. "Stolen sweets" sometimes "come high," as those Iowa boys can testify.

* * *

The Annual Report of the General Manager of the National Bee-Keepers' Association for 1903 is on our desk. It is a pamphlet of 60 pages, 6x9 inches in size. It is illustrated with half-tone engravings of all the officers and members of the board of directors. It contains a list of the membership, some 1600 in number, besides some other interesting matter. The receipts for the year, including the amounts received from former officials, is $1741.68; the expenditures were $626.60, leaving a balance on hand of $1115.08. But the expense of printing over 2000 copies of the present Report will reduce the balance several hundred dollars, probably.

The Report is mailed only to members of the Association, who will also ballot this month for three directors, a general manager, and on some amendments to the Constitution.

* * *

General Manager N. E. France is to spend the month of January among the bee-keepers of New York State. They will find him a very pleasant man to meet, rather quiet, but one who knows his business, and is not afraid to say what he thinks. He is doing good work as General Manager of the National Association, and should have all the support and encouragement possible in his work, which is mainly a labor of love, for the financial returns he receives personally out of the general managership is simply nothing when compared with the amount of work he is doing for the good of bee-keeping here in America.

* * *

Mr. Wm. M. Whitney, of Walworth Co., Wis., wrote us as follows, Dec. 10:

> FRIEND YORK:—Home again, and am feeling first-rate. We had a very enjoyable time at our Chicago-Northwestern convention. Never attended a better one. I shall continue my effort to form an organization of the bee-keepers here.
>
> Say, ask "Nebraska Subscriber" (see pages 797 and 798) to have his picture taken when he gets his toggery all on. I just noticed his description of it in the Journal. WM. M. WHITNEY.

Yes, we will be pleased to put his picture in the American Bee Journal if he will have it taken with his "toggery" on and forward it to us.

Sketches of Beedomites

MR. GUS DITTMER.

Gus Dittmer was born in Prussia, Germany, in 1853. He came to the United States in 1862, and to Wisconsin in 1863. He received a common school education, and afterward was in the boot and shoe business until 1893. He took a colony of bees from a customer in payment of a debt, in the fall of 1882. He read "Quinby's Bee-Keeping" that winter, and the next spring began handling bees. He took a great fancy to bees from the start, and has been a bee-keeper and reader of the bee-papers and books on bees ever since. He now keeps from 75 to 100 colonies.

After starting in the bee-business he began to furnish his customers and other bee-keepers with supplies, and after a few years he was supplying the whole country around him, and was even doing some shipping. He began making comb foundation several years before leaving the shoe-business. In 1895 he started in the manufacture of foundation and supply trade exclusively, the plant then consisting of a building 9x16 feet, with a cellar the same size. In 1896 he built a 2-story house, 18x24, and in 1898 added a two-story upright to this, 22x28, and began buying sections by the car-load.

Up to 1899 Mr. Dittmer's foundation was all made by the old dipping process, but since then he has been developing the process by which all of his foundation is now made. In 1900 he perfected automatic machines, geared to his foundation mills, that will continuously pull foundation from the mills, paper it, print his card on it, cut into proper length, and pile it up, all at one operation, at the rate of from 25 to 75 pounds every hour, one person doing the work.

In 1901 Mr. Dittmer added a shop, 15x24 feet, for a 2½ horse-power gasoline engine and the sheeting machines, and since that time all of the machines are run by power.

This fall the capacity had to be further enlarged by building a warehouse, 24x50 feet, two stories high, and the old building will be used only for manufacturing comb foundation, for storing the same and beeswax, and for a shipping-room and office.

All of the work is done right in Mr. Dittmer's family. Fred works with his father continually, and Clarence and Bessie are always ready to run a machine. In fact, they, with the occasional help of Mrs. Dittmer, run out all of the foundation, making, during the rush, as high as 750 pounds in one day.

Mr. Dittmer has been supervisor on the Eau Claire County Board since 1892, and was chairman of the Board six years out of the past eight. He is a teetotaler, minds his own business, and doesn't loaf around town.

In 1878 Mr. Dittmer was married to Jennie Hatch, and they have four children, as follows: Fred, 23 years of age; Bessie, 21; Clarence, 18; and Margaret, 8.

Mr. Dittmer is the efficient secretary of the Wisconsin State Bee-Keepers' Association. He is also one of the regular, responsible advertisers in the American Bee Journal, and his business is growing just as one would naturally expect in view of the character of the man and the pushing business methods he uses.

Contributed Articles

Making Vinegar Out of Honey and Water.

BY C. P. DADANT.

If you simply mix the honey and water so that an egg will fairly float at the top, showing about the size of a dime out of water, it may be sufficient or it may not, according to the amount of ferment contained in the honey, and also according to the temperature after the mixture is made. To make vinegar there must be an alcoholic fermentation previous to the acetic, and the more thorough the first fermentation is, the better the acetic fermentation will be.

In order to hasten the fermentation, it is best to add some fresh fruit-juice to your honey-water. Then, if the liquid is cold, or if the temperature is low, it is best to heat the liquid till it reaches about 90 or 100 degrees. If it is kept warm, the fermentation will soon begin, and if it remains exposed to the air it will be but a short time till the sour taste begins to show.

We never allow any honey to go to waste. The washing of the cappings in a well-regulated apiary will furnish enough vinegar for two or three families, even if only a few hundred pounds of honey have been uncapped. In a large apiary the cappings are first drained through the uncapping-can in a warm room till they seem perfectly dry, and even then several barrels of sweet liquid can be secured from the washing of the cappings of 15 or 20 thousand pounds of honey. We figure that each thousand pounds of honey extracted gives us about 15 pounds of beeswax from the cappings, and, perhaps, five gallons of sweet water fit to make good vinegar. So the apiarist should never render his beeswax till it has been thoroughly washed.

Vinegar that will not sour may lack two or three things, which are all needed. Sufficient warmth, as stated above. If all other requirements are right, it will still be impossible for vinegar to sour if the weather is cold. A good place to keep a gallon of vinegar is right behind the kitchen stove. In a few days a jug full of mild vinegar will become very sour. Do not cork it tight, but cover the mouth with a cork. A wide-mouth jar covered with a cloth is still better.

Air, that is, oxygen, is needed. The making of vinegar is simply the oxidizing of the sugar contained in the liquid. No change may take place unless air is, or has been, supplied. For that reason the vineyardist keeps his barrels of wine full, and bunged tightly, so that no air may reach the wine. If, perchance, a barrel remains open, he soon has a barrel of vinegar instead of a barrel of wine, and the better the wine has been the better the vinegar will be.

Sufficient sweetness is needed. If the directions I give are followed, a good article of vinegar will be produced. If you want to put the honey by weight, put not less than 2 pounds of honey for each gallon of water. A less quantity may make fair vinegar, but it is much easier to weaken your vinegar if too strong, by the addition of a little water when you wish to use it, than to strenghen it by adding more honey after it is partly made.

A very good inducement for any sweet or alcoholic liquid to turn to vinegar is the addition to the liquid of what is called "vinegar-mother"—the viscous, ropy matter which is usually found in a barrel of good vinegar. This "vinegar-mother" contains the principal ingredients that go to make vinegar, and although it is practically degenerated vinegar, yet it will add strength to the vinegar very promptly.

So, if you happen to have some old vinegar that has been long standing, you can soon strengthen your new vinegar by adding a little of this "mother." Do not listen to those who will say that this is a disgusting looking residue. It looks no worse than an oyster does. Vinegar containing this residue is sure to be pure and wholesome. Vinegar made from chemicals does not contain any mother, neither does it contain any living organism.

The more air the vinegar gets at proper temperatures, the quicker the vinegar is made. Manufacturers of first-class wine-vinegar in Europe often drain their vinegar through a barrel full of shavings slowly, drop by drop, so as to give it a good chance to air. In this way the best vinegar is made.

If you have no fruit-juices to add to your vinegar, a little cider will help to give it a start. Hancock Co., Ill.

The Use and Abuse of the Honey-Bee.

Read at the Minnesota State Convention in Dec., 1902,

BY FRANK YAHNKE.

THE little busy bee was in the Garden of Eden to fulfill its mission of pollenizing the flowers and gathering the honey for the unborn generations. When Adam tilled the soil the honey-bee was with him, and it has been taken wherever civilized man has gone. All the ancient writers mention the honey-bee, and the usefulness of its product. Homer, Herodotus, Aristotle, Varro, Virgil, Pliny, and other ancient sages, composed poems, extolling the activity, skill, and economy of the bee. In the Hebrew language the word *ghoneg* means delight, and where is there in the wide world an article more precious for food or medicine? Ovid, when describing the feast of the gods which required costly aliments and precious wines, says: "The delicious honey-cakes were never wanting."

In the statute books of ancient natives, laws are found for the protection of bees. The thief of a swarm of bees, according to old Saxon laws, was punishable by death. The old Bohemian people believed that it was a sin to kill a bee.

The honey-bee is just as useful now as it was in ancient times. In my younger days I planted, every year, a piece of cucumber for pickling, and was troubled greatly in the blossoms not setting fruit. I then began to keep bees, and that remedied the trouble.

How often our apple crop would be a failure if it were not for the aid of the honey-bee! The product of the bee is as useful as it ever has been.

"Honey is a food in one of its most concentrated forms. It gives warmth to the system, arouses nervous energy, and gives vigor to all the vital functions. To the laborer it gives strength, to the business man mental force. Its effects are not like ordinary stimulants, such as spirits, but it produces a healthy action, the results of which are pleasing and permanent—a sweet disposition and a bright intellect.

"Karl Gatter, a German teacher of the city of Vienna, says: 'In medicine, and especially in the healing of wounds, honey was used as a universal remedy already in early times. It yet constitutes the principal ingredient of several medical preparations, and is used with the best results in many internal and external diseases. It serves as a means for taking powders, for the preparation of salves, and the sweetening of medicine.'

"Honey is also of great value as a medicine for children, and is readily partaken of by them as a choice, dainty dish. For the removal of worms, honey has often been beneficially used, and it is often used in diseases of the mouth and throat."

Now, I come to the abuse of the honey-bee, which is not as old as its use. The first public abuse the honey-bee received that I know of, was when it was accused of puncturing grapes. Most of you remember how bitterly both sides of the question fought to prove their point. Brother fought against brother, and even went to court about it. To-day it is proved beyond all doubt that the honey-bee does not puncture grapes, or any other fruit. If a man now would claim that honey-bees punctured grapes, he would be looked upon as an ignorant man.

The latest abuse of the honey-bee is the spreading of blight. Let us look at this a little. Professors claim that the bees carry blight in nectar from flower to flower. How this can be I do not know, for bees carry nectar in the honey-sac, and I have never seen this leak yet. If the nature of blight is rightly understood, it will be found that blight does not begin in the flower, but that the dying of the flower is the result of the blight in the wood.

Experience has proved to us that in orchards where bees work extensively on the blossoms, there is the least trouble with blight, and in cases where there were no bees the trees were infested by blossom-blight.

I will not discuss the question longer in this paper, but I think it's very unwise for authorities to publish such theories in magazines (which every one looks upon as good authority), before it is proved beyond reasonable doubt that bees are guilty of carrying blight.

Winona Co., Minn.

Adulteration of Honey in Minnesota.

Read at the Minnesota State Convention, Dec., 1902,

BY G. L. DINGMAN,

State Dairy and Food Commissioner.

YOUR Secretary wrote me a letter asking what had been done by the State Dairy and Food Department in preventing frauds and adulterations in honey. Briefly, I will try to answer these questions.

During the two years of the incumbency of the present department there have been analyzed in our laboratory 112 samples. These were gathered by our inspectors from all parts of the State in their regular work. The results of these analyses are as follows:

Samples adulterated with cane-sugar....	8
" " " glucose........	7
" Imitation honey................	2
Total illegal samples......	17
Pure honey..........................	95

This is indeed a good showing, and when the investigation shows that not one of these illegal samples came from any apiary in Minnesota, the result is more than gratifying. The large number of California, or so-called California, honeys, that have been sold by the trade of the State, has been nearly driven out of the market by the superior product of the Northwest. The coarse, rank taste of these grades of honeys has never been pleasing to the palate of the consumer, and when a sufficient supply of such honey as the flowers of our own State yield to the little toilers, which store it up for our delicacy, can be produced to meet the supply of demand, these coarser products must find a less-favored market to meet with any sale.

A very large percent of strained honey has been sent to the commission dealers of the Twin Cities, especially during the past winter, and they, fearing from the extremely large amount that the product might not be pure, have submitted many samples to our chemists for analyses with the invariable record of the legality of the article. Several samples have, however, come to us from Wisconsin that have been found to contain sucrose. The producer, however, has claimed that we were in error, but when the matter was closely investigated it was found, as he claimed, the bees had been fed largely on cane-sugar, and this proved our chemist's contention that it was illegal. The reliability of his statement I leave to you, gentlemen, who are posted in such matters; we can only say our test proved the presence of quite a percent of cane-sugar, hence we could only pronounce the honey illegal.

We have prosecuted those cases, where intended violation was apparent, and we trust these examples may be prolific of good.

In conclusion, gentlemen, I must again congratulate the apiarists of the State on the fine quality produced, and also say that the Dairy and Food Department wish in every way to co-operate with you in advancing the interests of the honey-producers, as we believe we have a State of unsurpassed capability, and it only needs the energy and increased capacity of our apiarists to place Minnesota in the foremost rank in this another of her naturally favored industries.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

...A Holiday Greeting...

Marengo, Ill., Dec. 21, 1903.

DEAR SISTER BEE-KEEPERS:—

I congratulate you on the success of your department. It has been a success because so many of YOU have helped to make it so. Your hearty co-operation has been beyond my expectation. With heartfelt thanks for your contributions in the past, I bespeak a continuance of your favor in the future. I trust that we may hear from a still greater number in the coming year. Your letters are always eagerly welcomed, whether they record your successes or failures, or merely contain questions about our beloved pursuit.

To each one of you I wish

"A MERRY CHRISTMAS" and
"A HAPPY NEW YEAR."

Yours sincerely, EMMA M. WILSON.

Gifts and Novelties Made of Beeswax.

"Even the bits of beeswax intended for use in the sewing basket to wax threads with, are now made attractive by being molded in the shape of fruit, strawberries, cherries, blackberries and plums, all being seen. On the top of each one is a small silver leaf from which comes a bit of silk cord."

So says the "Department for Women" in the Chicago Daily News. We may not all be able to make easily the articles here mentioned, but we can make very pretty and serviceable gifts for our friends' work-baskets with what conveniences we have at hand. An egg-shell, or a thimble, makes a very good mold in which to run your hot beeswax. While the wax is still hot enough to be liquid, take two pieces of pretty colored ribbon, dip one end of each in the melted wax, and let it remain there till cold; then remove from the mold and fashion your ribbon into a dainty bow, and you have a very pretty gift, which will be much appreciated by many of your friends on account of the good service it will do.

Our Sisters Across the Sea.

R. Goldi is quoted as saying, in a Swiss bee-journal, some encouraging things for the sisters, which will bear repetition here without the use of quotation marks.

The bee-keeper who not only interests his sons in bee-keeping, but is able to inspire in his daughters a taste for it, so that in turn they may learn to uncap sealed combs, to extract honey, to place the combs in the hive, to remove or to introduce a queen, etc., gives them a lesson for the life which will certainly be more useful than if they should spend their time crocheting or embroidering in the heavy atmosphere of a stuffy parlor.

Madame Spencer, of St. Ives, takes care of her colonies absolutely alone, and she declares that, aside from the good health gained by exercise in the open air, she is indebted to her pets for quite a pretty income. It is true that she possesses a remarkable recipe, whose efficacy she has proven over and over again in the care of her bees: "Take," says she, "4 parts of enthusiasm, 1 part of sound common-sense, 1 part of perseverance, 1 part of courage, mix the whole and preserve in a bottle, and take as needed with a pinch of patience." Many lady bee-keepers in our land have followed this recipe, and have been present and taken part in our annual conventions.

Bee-keeping is, and will always remain, the poetry of agriculture, with which not only every man, but every woman, in city or country, should to some extent become acquainted.

Mother and Young Son Do the Bee-Work.

I can not keep bees and do without the American Bee Journal. I get so much information out of it. I had some bees for five years, and then I lost all I had—4 colonies. Then I bought one colony, paying $10 for it; that was three years ago, and I now have 26 colonies, also 4 on shares, making 30 in all. We have something over 2000 pounds of honey, besides all a family of six children can eat. One son (13 years old) and myself have done the work.

I have tried to get subscribers for the valuable American Bee Journal, but those "old buckwheats" will not listen; they know it all.

Long live "Our Bee-Keeping Sisters" department!

Union Co., Iowa, Nov. 23. **Belle Mutschler.**

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B Rural, Toledo, Ohio.

CATNIP NEEDS EXTRA-RICH LAND.

So in medium and medium-to-poor soils catnip in field-culture doesn't grow worth a cent. Come to think of it, that agrees well with my observation, and I guess it's so. A plant for extra-rich land and half-manure fence-corners where it is too rich for grass and the generality of weeds. Page 716.

A FINE CALIFORNIA PICTURE.

We have had many fine pictures of apiaries of late, but W. J. McCarroll's, on page 726, seems specially noteworthy. We can see why black sage is called black—and the intensity of the California sun.

MANIPULATION TO LESSEN SWARMING.

Yes, Mr. Getaz, when only 10 percent actually contemplate the wickedness of swarming, and we manipulate 100 percent to head it off, there's a provoking amount of lost labor that comes in. That's where the languid, and the lazy, and the played-outs get a chance to crow feebly over the smart folks. I had several years with scarcely more swarms than I wanted. Thought, be-sure, I'd have another such last season. Gee! Page 727.

A POUND OF HONEY FOR A STING.

If we could all get a pound of honey as a consolation for each sting, *a la* page 728, it would total quite an income for some of us—providing our Lady Bountiful didn't go bankrupt.

10-FRAME VS. SMALLER HIVES.

Sister Wilson, of course you are right as to your own thoughts, but you leave out the biggest and loudest of the *claims* the 10-frame folks make. They claim larger swarms and larger colonies, decidedly larger colonies, pretty much all the time. They think that that means more surplus, even after the chamber below has done its worst in absorbing it. I tell 'em that with my 7-frame arrangement I get some honey where they wouldn't get *any*. They have the cheek to deny this. Page 728.

SOIL BACTERIA FOR PLANT GROWTH.

In an editorial comment, page 739, bacteria are spoken of as if they were needed on the roots of asters and goldenrods. That is not the case, I believe. Most plants *do not try* to capture atmospheric nitrogen for nourishment, but rely wholly on the nitrogen contained in the soil. Only the clovers, and perhaps some other plants of the same natural order, have gotten onto the wonderful "scheme" of using atmospheric nitrogen captured for them by minute growths which they can harbor. The grape has nodules on its roots, but the inhabitants of the nodules are not supposed to furnish the vine with nitrogen. With a little lively imagination we could say that we must love the clovers because the clovers are bee-keepers. The root nodules are little hives, the inhabitants are little bees, and the nitrogen laid in is the honey—honey both for the use of the bee and the bee-keeper—allee same as we'uns. And when both bee and bee-keeper are dead, the fertility of the soil is found to have got ahead. All soils would be fertile if all plants worked this scheme—that is, so far as nitrogen could make them fertile they would be.

SMOKE AND NO SMOKE WITH BEES.

"We're all poor critters." If we *take a notion*—take a notion that it's a thing to be proud of to do without smoke—we can do much in that line, and make ourselves see it as the best way—especially when we are arguing with somebody out of reach of live bees. But contrariwise if we got in the habit of using smoke a little to excess, and somebody, unfortunately, pitched into us about it—and kept pitching in until we used twice as much as before, we can manage to see it best to use considerable smoke. An idle angel with mischief in his mind, could set the same man either way. As for me, I do not think ordinary smoke applied with a cold smoker harms bees to an extent worth mentioning. Thinking thus, naturally I think it foolish tactics to wait for signs of attack. Give them several puffs at the entrance the very first thing. Why not? Or are we in the bee-business for the simple purpose of showing off? Send in a few more puffs at the top immediately on opening. As for that several spells of puffing, and several waits of actual time by the watch, that's not for the bee-veteran but for the beginner. It's a very good plan for the beginner, indeed. Page 740.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Feeding Comb Honey vs. Candy in Winter.

I notice that you are being asked quite frequently lately to tell how to feed light colonies in cold weather. I also notice you recommend candy made of sugar and water. I wish to ask if you ever tried such candy yourself. And, also, if you ever tried comb honey in place of the candy? I tried candy on 5 or 6 colonies a couple of years ago, and every colony so fed *starved to death*, while a couple of colonies that were given some comb honey in sections lived through all right.

Since then I have carried over a good many light colonies by feeding comb honey, and believe that, counting the extra risk and work of making the candy, honey is the cheaper of the two. Of course, the cheapest grade of honey will do, just so it is sound, ripe honey; or cull sections will do. For cellar feeding of box-hive colonies, turn hive bottom up, and lay on enough sections to make sure of plenty, and cover with a piece of carpet or quilt, or anything to hold the heat of the bees without being tight enough to smother them. For hives with frames, remove the cover and lay the honey on the frames, directly over the cluster, and cover the same way. Colonies in hives with frames may be fed the same way out-of-doors, excepting more covering is necessary over the honey. In either case the honey is laid down flat on the frames or combs, and, if it is thought one layer of sections of honey is not enough, or it is desired to add more afterwards, the latter can be laid right on top of the first. The colonies so fed, with me, have *all* wintered perfectly, seemingly better than a great many colonies that had plenty of stores in their own combs, and wintered in the same cellar. The candy I fed was *not burned*, and was apparently just as it should be, according to the books, but the bees gnawed it up, and it dropped to the bottom-board about like hard candied honey would, and they died leaving part of the cake of candy on the frames.

Now, I am aware that "one swallow does not make a summer," but I am sure I always think of those 5 or 6 colonies I might have saved when I see some one advised to feed hard candy.

Let us know whether you know from personal experience that such candy can be made to do as *some say* it will.

IOWA.

ANSWER.—No, I never fed in winter, so there never was any need of my using candy. But others have used it, and I do not remember that any one has heretofore reported failure with it. Indeed, I think some say that they prefer it, although it is generally recommended for feeding in winter, because at that time it is not safe to feed syrup, and those who have to feed in winter are not likely to have sealed combs on hand. With your experience you are wise to prefer sections. I am wondering whether it may not be that some others have had a like experience without being so frank about telling of it as you are. It might be a profitable thing if those who have used candy would tell us of their success—or of their failure.

Wants to Increase an Apiary.

I lost all of my bees in the winter of 1902–03. I have 8 more colonies of bees, and $50 to begin with again, and wish to increase my apiary. Which is the more profitable, to buy bees in box-hives at $3 a colony, transfer and divide, rearing the queens myself, or buy queens and increase from the 8 colonies I have? I reared my own queens the last two years.

Our main honey-flow is from alfalfa and sweet clover; we have a continuous flow from the last of June until the first of September.

UTAH.

ANSWER.—You say, "I have reared my own queens the last two years." That makes me think you have had considerable experience, and with a continuous flow for two months or more from alfalfa and sweet clover, you ought to get a nice return from your bees, so that it would be better to invest in the box-hive colonies and run the 8 colonies at least partly for honey. In any case, by buying you could have more colonies for next year, and so the sooner have the increased profit from a larger number. If, however, there is considerable danger that you may repeat last winter's experience in wintering, then you might better limit yourself to the 8, increasing from them so carefully that all would be strong for wintering.

Width of Top-Bars.

An editorial in a recent bee-paper recommended top-bars of common hanging frames only ⅞ of an inch wide. Is that good advice?

WISCONSIN.

ANSWER.—Paraphrasing the words of Lincoln, for those who need that sort of advice that is the very sort of advice they need. If you want me to answer the question with a curt yes or no, I must say I don't know. There might be more than one understanding of the question. It might be construed, "When common hanging frames are used, is it good advice to advise that they shall be only ⅞ of an inch wide?"

I rather incline to answer yes to that question. The one special advantage of loose-hanging frames is that there is no need of any dummy to get out the frames, but that by shoving the frames to one side you may lift out any one frame without lifting any other. To be sure, you may with fixed-distance frames lift out any one frame without lifting any other, but you must first lift out the dummy. If top-bars be 1⅛ wide, leaving only ¼ inch between them, a larger number of frames must be moved to get one out than with ⅞ frames that make the space twice as large.

That, however, is a rather forced construction of the question, and we may broaden it by asking whether it is advisable to change from fixed-distance frames to the loose-hanging frames mentioned. This advice has lately been given by at least two prominent foul-brood inspectors, the advice being given with emphasis. I believe the advice is good—at least to the extent that such a change would be a real improvement in some of the cases we have met. Fixed-distance frames, so thoroughly glued together that it is five times as hard to get out the first frame as it is with loose-hanging frames—when a foul-brood inspector meets such a case I don't blame him for saying emphatically that loose-hanging frames are better, and the narrower the top-bars the easier to get out the frames.

Suppose we put the question in its broadest sense, which, very likely, is the sense intended, and ask whether it is good advice to recommend loose-hanging frames with narrow top-bars. If you allow me to answer it for myself, under my conditions, I must give a very emphatic *no*. I have used loose-hanging frames with 1-inch top-bars—used them by the thousand for years—and for some years have used fixed-distance frames, and it would take quite a little money to hire me to go back to loose-hanging frames. If the top-bars had been only ⅞, it would have been easier to get out the frames; but if it were made so easy that any one frame could be taken out without moving any other frame, I still would not be willing to give up the advantages of the fixed distance. But I want so few and so small points of contact between the frames that it will always be a light thing to separate them.

Californians who work for extracted honey say fixed-distance frames are barred, because the spacers interfere with the knife when uncapping. If I were working for extracted instead of comb honey, I might agree with them. I have, however, a lingering notion that if some of them should work for a while with such frames as I use, they might endure the inconvenience of the spacers when uncapping, rather than to forego the advantages that I believe they would discover.

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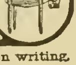

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Please mention Bee Journal when writing.

FROM MANY FIELDS

Managing an Out-Apiary.

I will try to tell how I work my out-apiary. The greatest help I have is the drone-guard, made with cone-escape, with a tin slide, so I can close or open the escape. After the hives are leveled up I put a drone-guard on every colony but one; this is an extra-good colony that I keep for drones, and manage it so as not to have them swarm. I leave them for 8 or 10 days with no one to look after them.

When I go to the apiary I examine each colony carefully by removing the drone-guards to see if there are any dead queens. If I find any of these I give that colony a comb with eggs in it. I leave the guards off in the forenoon for the bees to get their hives well cleaned out; in the afternoon I put the guards on with the escape open. Until about 4 o'clock I look every little while for queens that may have come out to be fertilized. If I find one I let her in the hive and dispatch the drone.

I spend my time in doing anything that may need doing, and making sure that they have plenty of room at all times for both brood and honey. If there are any bees that seem to be loafing or lying out, I leave the queen below and place the brood in the upper story with a queen-excluding honey-board under it. About 4 o'clock I dispatch what drones are out, and close the escape, and leave them for another 10 days. This keeps my colonies strong, and I get more honey than my neighbors, and with no expense for labor. I have worked the out-apiary three years this way, but have made a success in getting honey, and without the expense of paying a man to watch the bees. C. J. BARBER.

Monona Co., Iowa, Dec. 12.

Poor Honey-Years in Succession.

The honey crop was very poor here the past season, which makes five poor honey-years in succession, and each one of the five was poorer than the one before. A. W. SMITH.

Sullivan Co., N. Y., Dec. 1.

Some Experience With Bees.

My experience with bees in the past, and outlook for the future, I would compare to the unregenerate son of Adam, and his condition after being converted to the Gospel of Christ. I feel, concerning apiculture, as if I had been "born again," and, "as a new born babe," desire "the sincere milk of the word" (American Bee Journal) "that I may grow thereby;" and yet, in this case, I don't know that I shall believe all things I read.

I am now 32 years of age, and my experience with bees has been as follows: About 17 years ago a swarm came to my father's home and settled on a cedar limb about 15 feet from the ground. My father rushed around and fixed up an old upright hive that he had pur-

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"Buckwheat Cakes and Honey"

Words by EUGENE SECOR.
Music by GEORGE W. YORK.

This song was written specially for the Buffalo convention, and was sung there. It is written for organ or piano, as have been all the songs written for bee-keepers. Every home should have a copy of it, as well as a copy of

"THE HUM OF THE BEES in the APPLE-TREE BLOOM"

Written by
EUGENE SECOR and DR. C. C. MILLER.

PRICES—Either song will be mailed for 10 cents (stamps or silver), or both for only 15 cents. Or, for $1.00 *strictly in advance* payment of a year's subscription to the American Bee Journal, we will mail both of these songs free, *if asked for.*

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chased bees in a number of years before (and lost them the same winter), and then rang the bell frantically for me, I being about a half mile away working in the onion-field, barefooted, and in my shirt sleeves. Supposing the house was on fire, or somebody hurt, I ran the distance, and was told, "There is a swarm of bees in the cedar-tree, and I have everything ready, and am sweaty, and it won't do for me to get stung; you will have to hive them." So I climbed the ladder, pocket-knife in hand, clothed as I came from the field (It was a fine cluster, and would probably have filled a peck measure), and proceeded cutting off the limb, and, then, putting the blade of the knife between my teeth, started down. Presently I struck another limb, knocking off part of the bees, and a large number of them darted for my face and neck and stung me (I used to estimate it at 20 times). My appearance afterwards was that of one having a severe case of mumps.

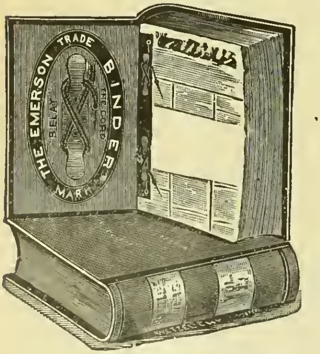
Well, I deposited the swarm in front of the hive as quickly as possible, and then excused myself for the time being. Father, at this juncture, took a position at the rear of the hive, and with a long stick drummed them in.

The bees I have now are descendants from that colony, excepting from such as I sold up to the present time. Eleven years ago they had increased to 4 colonies, which I purchased from father, working the month of July for them. Three of them were in Langstroth hives, and one in a box. I have always wintered my bees outside, formerly putting them on the south side of a building, with no other protection than perhaps a few boards thrown on top of the covers. In more recent years I have packed them in straw, protecting all but the front of the hives

This winter I have put on mouse-protectors, made by cutting a lath long enough to reach across the entrance of the hive, and nailing on it a strip of tin one inch wide, and pressing the same down at the entrance of the hive, leaving a bee-space beneath it. I kept the bees, purchased eleven years ago, until 1897, when I had 6 colonies that I sold, 5 to a neighbor, and one back to father. In 1899 I purchased 3 colonies from father (the increase from this one) by painting a 30x40 foot barn with two coats of white lead, furnishing the same.

In 1900 I tried doubling my number by dividing the colonies, but the next spring about the same number showed up living. In the spring of 1903 I started with 4 colonies, which have increased, by swarming, to 8, and

The Emerson Binder



This Emerson stiff-board Binder with cloth back for the American Bee Journal we mail for but 60 cents; or we will send it with the Bee Journal for one year—both for only $1.40. It is a fine thing to preserve the copies of the Journal as fast as they are received. If you have this "Emerson" no further binding is necessary.

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The rapid expansion of our business has driven us out, and on January 1st we will be located at **51 WALNUT STREET.** This forced change will remove us only half a block from our old home, but there we will have four floors, with increased facilities, and a **TREMENDOUS NEW STOCK OF BEE-SUPPLIES.**

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REMOVAL NOTICE.

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Poultry and Bee-Keepers' Supplies in the West.

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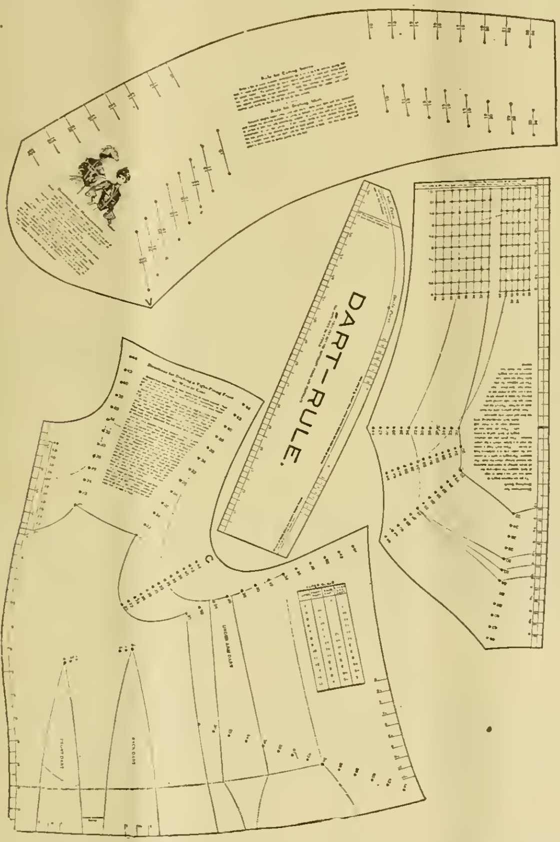
42A11t **R. H. SCHMIDT CO., Sheboygan, Wis.**

Something FOR OUR Bee-Keeping Sisters in the Winter Time.

We think all ladies will agree with us in saying that every man should at least understand some business, with which, in case of necessity, he could support himself and family. The wealthiest people frequently come to want, and wretched, indeed, is the man who cannot earn a living after his wealth is gone. He sometimes fills the grave of a suicide. And why, in this enlightened age of progression, should not woman, as well as man, be able to depend on her own resources! In case her husband dies in poverty, must she starve or depend on charity? In case her husband fails to provide and grossly mistreats the woman he has sworn to cherish, must she humbly submit? **A THOUSAND TIMES, NO!** Let every woman, before she marries, have some knowledge that can be used to make her a living. Every mother, rich or poor, should make her daughters, in a certain degree, independent, by giving them some kind of a trade, and teaching them to be self-reliant. Mothers should have their daughters learn to sew, and not neglect this important part of their domestic education. The daughter so taught will not only make a better wife and mother, but will also be more likely to secure a better husband, and will always command his respect. He will not look upon her as a helpless "know-nothing," but will know that if he fails in his duties, she can live without him, and this can only strengthen the bond between them. A thorough knowledge of dressmaking can always be turned into gold, and become the means of support for the mother and her little ones. She may never have to use this knowledge in this way, but she has a trade and can use it if necessary.



The outline cut shown herewith is a condensed copy of **THE NEW LONDON LADIES' TAILOR SYSTEM** for drafting and cutting ladies' and children's garments. For simplicity and accuracy it has no superior among the more expensive systems. Thousands of girls have learned more about drafting and cutting with this system than they knew about it after serving their apprenticeship in some of the dressmaking shops of the United States and Canada. Thousands of the best garment cutters have laid their complicated and expensive system aside, and are now using **THE NEW LONDON TAILOR SYSTEM.** Thousands have been sold at $5.00 each, but we mail it Free to a paid-in-advance subscriber to the American Bee Journal for sending us two new subscribers at $1.00 each; or we will send it to any one with a year's subscription to the American Bee Journal, both for $1.75; or, we will mail the Tailor System alone for $1.00. Address all orders to

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I have again bought the increase from father's old colony, and have gone into winter quarters with 10 colonies, and the nucleus still remains.

It would make a small book if I were to go into the details of my experience with the honey part of this subject, so I will cut it off here.

I have been assisting a Mr. Myers in putting his bees into the cellar to-day. We weighed a great many hives (10-frame Langstroth, single-walled hives, without the top), and they ranged from 43 pounds to 81½. Of 61 which we put in to-day, the larger portion of them ranged from 55 to 75 pounds each.

CHARLES F. CLEMONS.

Scott Co., Iowa, Dec. 1.

Bees Wintering Well.

Bees are wintering finely, and are well supplied in stores, with the exception of late swarms. Since the first of July the bees never did better or obtained more honey.

Cass Co., Nebr., Dec. 4. J. M. YOUNG.

Best Crop in 15 Years.

We have had a better honey crop this season than for 15 years, and the most of the honey was gathered from white clover. I sold nearly all of my extracted honey for $1.50 per gallon.

CHARLES DUCLOS.

Saginaw Co., Mich., Dec. 4.

Clipping and Introducing Queens—Other Kinks.

Our Editor York has called for an examination, and it is likely he will not rest easy until he has had us all "upon the carpet."

I have no college qualifications to parade before the eyes of the readers, but I have found a few gaps in bee-keeping which may be of interest to the beginners. I will not tell how many colonies of bees I have, or how much honey I got the past season, for the reason that it would not throw any light on the question asked; but I will say that our bees beat a 160-acre farm, and it will not take all the surplus to feed them while they are producing another crop, either.

First, I will tell which is the most suitable time for me to clip queens. Formerly I did this job in early spring, but the past season stores were low, nothing coming in, and as soon as a hive was opened the robbers started; a tent was a botheration, the wind would blow it over, and the limbs of trees in the grove aided in the trouble, and I abandoned clipping, thinking I must try one season without it; but the tall trees were an eye-sore to me, and just before swarming-time I determined to clip the queens, and be boss of the yard. The hives were heavy in bees, but honey was coming in, and I could, by opening the hives early in the morning, as soon as I could see to tell a queen, find and clip from 8 to 12 while the "old lady" was getting breakfast. It took but a very little smoke, and often none at all. In the middle of the day I had lots more hunting to do to find them; the smoke would scare them off the combs, so I abandoned it and waited for early mornings. By so doing I did the clipping the easiest and most agreeable way I have ever done it since I have been in the business.

The increase was managed in a different way from what I formerly used, and I like it. When a swarm came off, heretofore, I had increased one, but this season I divided the old colony's combs and made two 4-frame nuclei, and gained an additional one over the old method. I wanted to increase to 30, so the first 15 swarms gave the desired increase, and what swarmed after that was returned to the old hive, by removing the queen when they issued. The hives of these 4-frame ones I filled with drawn combs. I made sure to take an outside frame for each nucleus, as the outside frames usually carry more honey than brood. I took care that each hive had a queen-cell; if it was on the bottom of combs I cut it out and placed it, as the Bee Journal told us, in the center, and close to the top-bar, that it might not chill. I got fooled with one where I had placed division-boards instead of frames, and before I learned it they had

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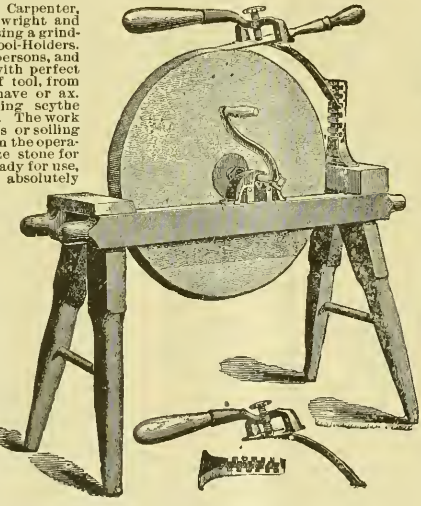

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started to build combs on the bottom of the hive-cover, just as the Bee Journal said it would. If we would always pay attention to instructions we could find the gaps, and often avoid difficulty. The 4-frame nuclei gave a super of honey each, and those that were returned to the old hives were in fine shape for business, and attended to it, too.

When Dr. Miller told us about drowning of queens to insure safe introduction, I tried it in less than an hour's time after reading it, and found it practical in each trial except one, and that one was a virgin queen, and she "came up missing." This is the way I did the thing:

Each was a laying queen, and was placed in a spiral cage and closed in, then the cage was placed in a vessel of water, deep enough to cover the cage. A comb with bees was out and ready for her. After a minute or so I released her among the bees, and sometimes, if not stupefied, she would start off on a trot with the bees after her; then she was given another immersion, and when released she would stagger and cling to the combs with all the "go" washed out of her, and would stand still and let the bees lick her off. The frames were then placed in the hive, and the next day she would be found busy laying. We had a lot of queenless colonies on which we tried the hurry-up plan, but had, instead, hurried it down, where I had run hatching queens in I would find them removing queen-cells. I wanted to save time, and used these queens to do so, but over 50 percent of these "run ins" "came up missing." This has bothered me for several years, and each time I laid it to the kingbirds taking the queen when on her

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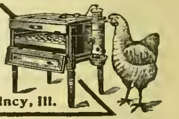

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wedding-flight, whereas she had never been allowed to live to take the flight, as the bees had killed her. Hereafter, if I can I prefer letting the queen hatch in the hive she is to occupy, and what cells hatch in my hands when removing them will never be used, unless it is an emergency; and before doing so she will get the water-cure. The kingbirds and I have buried the hatchet, and will be friends. I will kill no more of them. The queens will get the water-cure when clipping hereafter, as I usually have some balled from the scare she gets, which starts her running when released. The older bee-keepers may hoot at the idea, but I believe the attack originates mostly from fear on the part of the queen. If it comes from the scent of being handled, the water will remove it. Try it, boys, as I did, and see what is in it.

Mr. Davenport, our neighbor on the North, was complaining about too much pollen being deposited in the brood-nest. Same thing here. The plague is a serious affair with me, as the combs often become so filled with it that there is but little room for brood. I can help it by breaking in the caps on honey, and have it carried up-stairs, which will enlarge the brood-space. My bees will not carry honey up-stairs from the brood-nest unless the caps are broken. I have read that the bees would clean the combs of pollen, but I waited a long time for them to do it, and waited in vain until I hit upon that plan:

I had a lot of combs which were a mass of pollen; these I was melting into wax; they had been in empty hives where the bees had carried all the honey that was in them, and had become dry. I found that by giving 4 of these with 4 of foundation to a new swarm they would clean them out as free from pollen as could be. I, too, tried soaking them, but it was "no go"—the pollen appeared to swell tight, and stayed there; but if they had no honey in them they appeared to dry out, and bees did the rest, but with honey in them the pollen staid in the frames. I wonder what is Mr. Hasty's opinion about it. All that I can see for us in this pollen district to do, is to remove the frames that are pollen-bound, and place them where the bees can clean out the honey, but not to allow robbing to originate from it, then leave the combs in the empty hive to dry, and not give over 3 or 4 at once. I would like a more simple remedy, but must use the above until some one tells me of a better plan.

I will say to Yon Yonson, that Tom Carter says we will try his method of catching fish next summer, when the haycocks bloom. He is all right, and can come again.

I wonder if there is any danger of the bee-keeping sisters going off and starting a bee-paper of their own. Hope they will not, until we get some of those bachelors married off. Say, ladies, those fellows have no pluck, or they would have had a lady cook long ago.

A. F. Foote, of Mitchell Co., Iowa, appears to be worried over the problem of keeping down increase. Some people like trouble well enough to take a spade and dig for it. If Mr. Foote will clip his queens' wings, and remove the queen when the swarm issues, the bees will return to the old hive, and he has then a double-header for business.

Mr. Patton, of Alabama, tries a dig at Mr. Davenport, of Minnesota, about his black bees. Say, Mr. Patton, come up here with some of your Italian bees and see if our dark bees don't "put it all over" your yellow

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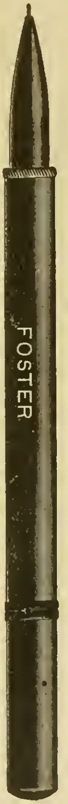

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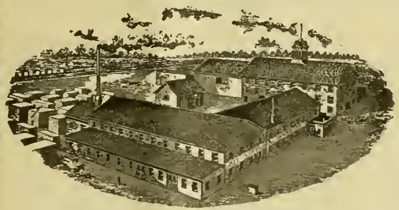

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ones. They are nice to look at, but honey is what we are after, and our blacks get it.

A bulletin board is a nice thing in the yard. The "wants" can be placed where they are before our eyes in plain view. Often the wants are overlooked when placed in a note-book. Things needed to be done in a few days are sometimes forgotten, while a note of it on the blackbroad tells you what is wanted. For instance, on examining a hive to remove the queen-cells, it is found to be pollen-bound. You probably have other urgent business and have no time then, and, if you do, it is hardly the right time to open the combs by cracking the caps, for there is no queen to occupy them, and the honey is not removed up-stairs until the room is needed. You make a note on the blackboard like this: "Open combs in 195," and date the note; you can't forget to do this, as it is there in plain view daily. When you have finished the job erase the note. We often run on "needs," but cannot apply the remedy, so the blackboard will finish up the odds and ends. J. P. Blunk.

Webster Co., Iowa, Dec. 2.

Introducing Queens.

I had some experience last spring in the introduction of queens, which differed very materially from any I ever had before. One colony out of 16 swarmed early, when there seemed but little for the bees to get, the swarms having to be fed, but later on they got to be prosperous. I caught the queen in the parent colony four weeks after casting the swarm, and killed her, introducing an Italian queen caged in her stead. The bees, in 50 hours, had released the Italian queen and received her apparently in good condition. Six days later, upon examination, the bees had killed the Italian queen and started new cells; these I cut out, and, on examination three weeks later, I found them hopelessly queenless, whereupon I grafted into the combs two nice Italian queen-cells, which they accepted and reared a nice queen. I then went to the prime swarm and introduced a queen which the bees killed in the cage before releasing her. I grafted cells into their combs, which they destroyed. I then left them alone two

Dr. Miller's New Book

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The book contains 328 pages, is bound in handsome cloth, with gold letters and design; it is printed on best book-paper, and illustrated with over 100 beautiful original half-tone pictures, taken by Dr. Miller himself. It is unique in this regard.

The first few pages of the new book are devoted to an interesting biographical sketch of Dr. Miller, telling how he happened to get into bee-keeping. Seventeen years ago he wrote a small book, called "A Year Among the Bees," but that little work has been out of print for a number of years. While some of the matter used in the former book is found in the new one, it all reads like a good new story of successful bee-keeping by one of the masters, and shows in minutest detail just how Dr. Miller does things with bees.

HOW TO GET A COPY OF DR. MILLER'S "FORTY YEARS AMONG THE BEES."

The price of this new book is $1.00, post-paid; or, if taken with the WEEKLY American Bee Journal for one year, BOTH will be sent for $1.75.

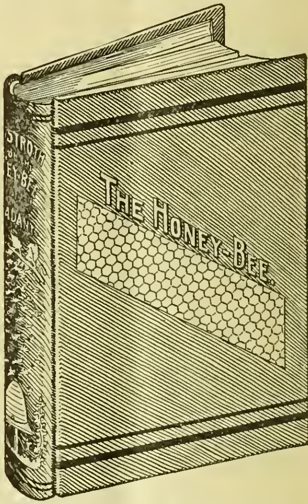
Or, any present regular subscriber to the American Bee Journal whose subscription is paid in advance, can have a copy of Dr. Miller's new book *free as a premium* for sending us Two New Subscribers to the Bee Journal for one year with $2.00. This is a magnificent offer, and should be taken advantage of at once. For many of our readers it is not only an easy way to earn a copy of the book, but at the same time they will be helping to extend the subscription list of the old American Bee Journal, and thus aiding also in spreading the best kind of apicultural information among those who would be successful bee-keepers.

Address all orders to
GEORGE W. YORK & CO.,
144 & 146 E. Erie Street, CHICAGO, ILL.

Langstroth on the Honey-Bee

Revised by Dadant—Latest Edition.

This is one of the standard books on bee-culture, and ought to be in the library of every bee-keeper. It is bound substantially in cloth, and contains over 500 pages, being revised by those



large, practical bee-keepers, so well-known to all the readers of the American Bee Journal—Chas. Dadant & Son. Each subject is clearly and thoroly explained, so that by following the instructions of this book one cannot fail to be wonderfully helped on the way to success with bees.

The book we mail for $1.20, or club it with the American Bee Journal for one year—both for $2.00; or, we will mail it as a premium for sending us THREE NEW subscribers to the Bee Journal for one year, with $3.00.

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We have made arrangements with the publishers of Gleanings in Bee-Culture (issued twice a month), so that we can furnish that magazine with the Weekly American Bee Journal—both one year for but $1.60; provided you are not now a subscriber to Gleanings.

This is a magnificent offer, and should be taken advantage of by all of our readers who are not now getting Gleanings regularly. These papers, although on the same subject, are conducted so differently, and contain such a variety of reading matter, that every bee-keeper should have them both. And they can be had for a whole year for $1.60. Address all orders to

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Forty Years Among the Bees, by Dr. C. C. Miller.—This book contains 328 pages, is bound in handsome cloth, with gold letters and design; it is printed on best book-paper, and illustrated with 112 beautiful original half-tone pictures, taken by Dr. Miller himself. It is unique in this regard. The first few pages are devoted to an interesting biographical sketch of Dr. Miller, telling how he happened to get into bee-keeping. Seventeen years ago he wrote a small book, called "A Year Among the Bees," but that little work has been out of print for a number of years. While some of the matter used in the former book is found in the new one, it all reads like a good new story of successful bee-keeping by one of the masters, and shows in minutest detail just how Dr. Miller does things with bees. Price, $1.00.

Bee-Keeper's Guide, or Manual of the Apiary, by Prof. A. J. Cook, of Pomona College, California. This book is not only instructive and helpful as a guide in bee-keeping, but is interesting and thoroughly practical and scientific. It contains a full delineation of the anatomy and physiology of bees. 544 pages. 295 illustrations. Bound in cloth. 19th thousand. Price, $1.20.

Langstroth on the Honey-Bee, revised by Dadant.—This classic in bee-culture has been entirely re-written, and is fully illustrated. It treats of everything relating to bees and bee-keeping. No apiarian library is complete without this standard work by Rev. L. L. Langstroth—the Father of American Bee-Culture. It has 520 pages, bound in cloth. Price, $1.20.

A B C of Bee-Culture, by A. I. & E. R. Root.—A cyclopedia of over 500 pages, describing everything pertaining to the care of the honey-bees. Contains about 400 engravings. It was written especially for beginners. Bound in cloth. Price, $1.20

Scientific Queen-Rearing, as Practically Applied, by G. M. Doolittle.—A method by which the very best of queen-bees are reared in perfect accord with Nature's way. Bound in cloth and illustrated. Price, $1.00; in leatherette binding, 60 cents.

Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—It is nicely illustrated, contains 160 pages. Price, in cloth, 75 cents; in paper, 50 cents.

Advanced Bee-Culture, Its Methods and Management, by W. Z. Hutchinson.—The author of this work is a practical and entertaining writer. You should read his book; 90 pages; bound in paper, and illustrated. Price, 50 cents.

Bienen-Kultur, by Thomas G. Newman.—This is a German translation of the principal portion of the book called "Bees and Honey." 100-page pamphlet. Price, 25 cents.

Apiary Register, by Thomas G. Newman.—Devotes two pages to a colony. Leather binding. Price, for 50 colonies, $1.00.

Dr. Howard's Book on Foul Brood.—Gives the McEvoy Treatment and reviews the experiments of others. Price, 25 cents.

Winter Problem in Bee-Keeping, by G. R. Pierce.—Result of 25 years' experience. Price, 30 cents.

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Foul Brood, by A. R. Kohnke.—Origin, Development and Cure. Price, 10 cents.

weeks and grafted in more queen-cells, which they treated as the first ones. I knew they had no queen, as I had caught and killed her before introducing the queen, which they killed in the cage. This colony never would receive any aid, and continued in this hopeless condition until death resulted. Why were they so contrary? J. B. AUSMUS.

Benton Co., Ark., Dec. 7.

Moving Bees—Season's Report.

On March 7, 1903, I reached this place with 30 colonies of bees. I had to feed some before fruit-bloom, but we are located in the midst of 4000 bearing apple-trees, and a large area well set with white clover, catnip, smartweed and dandelion.

I have increased to 45 colonies, and sold $150 worth of honey, the most of it comb honey. Our bees worked a good deal on red clover.

In moving on the railroad we saved the work of sawing our hives full of air-holes to ventilate the bees, by simply tacking wire-cloth over the hive-entrances, and then placing each hive facing out from the center of a stock-car, and the motion of the train did the rest. When we reached St. Louis the switchmen never failed to see the few bees that had escaped from the hives, so they bumped us very easy. GEO. R. KELLY.

Cooper Co., Mo., Dec. 8.

CONVENTION NOTICES.

Kansas.—The first regular meeting of the Kansas State Bee-Keepers' Association will be held at Topeka, Dec. 30. All persons interested in bees, whether members or not, are urged to be present. O. A. KEENE, Sec.

Topeka, Kan.

New York.—The annual meeting of the Oswego County Bee-Keepers' Association, will be held at Oswego, N.Y., Tuesday, Jan. 12, 1904. N. E. France, General Manager of the National Bee-Keepers' Association, will be present and address the meeting. All persons interested in bees are cordially invited to be present. CHAS. B. ALLEN, Sec.

Central Square, N. Y.

Minnesota.—The annual meeting of the Southeastern Minnesota and Western Wisconsin Bee-Keepers' Association will meet at Winona, Minn., at the Court House, in the County Commissioners' rooms, on Tuesday, Jan. 19 (and 20), 1904. A full attendance of the members, their wives and friends, is invited to this, our annual meet. All bee-keepers everywhere are cordially invited to attend. W. K. BATES, Pres.

Stockton, Minn.

New York.—Mr. N. E. France, of Platteville, Wis., General Manager of the National Bee-Keepers' Association, has been secured by the Bureau of Farmers' Institutes to speak at a series of Bee-Keepers' Institutes in connection with the local bee-keepers' societies as follows: Canandaigua, Jan. 6 and 7; Romulus, Jan. 8; Cortland, Jan. 9; Auburn, Jan. 11; Oswego, Jan. 12; Amsterdam, Jan. 13; Syracuse, Jan. 14 and 15. The meeting on the 15th will be that of the New York State Association of Bee-Keepers' Societies. C. B. HOWARD, Sec.

Romulus, N. Y.

HONEY AND BEESWAX

When consigning, buying or selling, consult

R. A. BURNETT & CO.,

199 SOUTH WATER ST. CHICAGO, ILL.

WANTED—Comb Honey in quantity lots. We are perhaps the only dealers in this article owning as much as 150,000 pounds at one time. Please state quantity, quality and price asked for your offerings. Thos. C. Stanley & Son,
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WANTED! FANCY COMB HONEY

In no-drip shipping-cases. Also Amber Extracted in barrels or cans. Quote your best price delivered Cincinnati. The Fred W. Muth Co.
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and you may have part of it if you work for us. Uncle Sam's poultry product pays that sum. Send 10c for samples and particulars. We furnish capital to start you in business. Draper Publishing Co., Chicago, Ill.

HONEY AND BEESWAX

MARKET QUOTATIONS

CHICAGO, Dec. 7.—At this season of the year there is not much trade in honey, retailers having laid in their stock for the holidays. Fancy comb honey for the Christmas trade has brought 13½c; No. 1 grades, 12½@13c; amber, 9@10c. Extracted white, brings 6@7c; amber, 5@6c. All extracted honey is sold on its flavor, quality, kind and style of package. Beeswax, 28@30c. R. A. BURNETT & CO.

PHILADELPHIA, Dec. 10.—Large lots of comb honey being offered from States that were not supposed to have much stock. Bee-men, as usual, wake up now to the fact that they want to sell their comb honey and push it on the market, thus breaking the price. If they would only offer their honey in September, they would get more for it and it would be better for the producer and dealer. We quote fancy white, 14@16c; No. 1, 12@14c; buckwheat, 12c. Fancy extracted, 8c; amber, 6@7c. We are producers of honey, and do not handle on commission.
WM. A. SELSER.

ALBANY, N. Y., Dec. 15.—Market very dull, and lower since the cold weather. Quotations have to be shaded, and concessions made to effect any quantity sales. H. R. WRIGHT.

CINCINNATI, Nov. 20.—The demand for comb honey is slower now than it was six weeks ago, owing to the enormous quantities offered on all sides. Fancy comb is sold in single case lots at 14c. The supply of extracted honey is big, although the demand is good. We are selling amber extracted in barrels at 5¾@6½c. White clover, in barrels and cans, 7½@8½c, according to quality. Beeswax, 30c.
THE FRED W. MUTH CO.

BUFFALO, N. Y., Oct. 11.—The demand for white comb honey is better than it was. The trade is particular and wants only very white, clean stock. If the wax is yellow from travel-stain it does not sell well, and price has to be cut. Fancy white comb, 14@15c; A No. 1, 13½@14c; No. 1, 13@13½c; No. 2, 12@12½c; No. 3, 11@12c; No. 1 dark comb, 11@12c; No. 2, 10@11c. White extracted, 6½@7c; amber, 6@6½c; dark, 5½@6c. Beeswax, 28@30c.
W. C. TOWNSEND.

BOSTON, Nov. 25.—Western honey is arriving more freely in our State, causing a slight drop in prices. Fancy No. 1, in cartons, brings 17c; A No. 1, 16c; No. 1, 15c. Extracted, white, 8½c; light amber, 7@7½c; amber, 6@7c, according to quality. BLAKE, SCOTT & LEE.

KANSAS CITY, Dec. 18.—Since our last quotations there have been two cars of western comb honey put on our market, and same is being sold (without any good reason,) at prices not justified by market conditions. Fancy white comb, 24-section cases, $2.65; No. 1, $2.50; No. 2, $2.40. Extracted, white, per lb., 7@7½c; amber, 6@6½c. Beeswax, 25@30c.
C. C. CLEMONS & CO.

CINCINNATI, Dec. 18.—The market on comb honey has weakened, as the supply has been larger than the demand. Fancy water-white 14c; off grades, lower. Extracted, amber, in barrels, 5¼@5¾c; in 60-lb. cans, ½c more; alfalfa, water-white, 6@6½c; fancy white clover, 7@8c. Beeswax, good demand: 30c for nice.
C. H. W. WEBER.

NEW YORK, Dec. 4.—Comb honey is arriving in sufficient quantities to supply the demand, and, as to the quality, most of the white honey seems to be off color, more or less. We quote fancy white at 14c; No. 1 at 13c; amber, 11@12c; and buckwheat, 10c. Extracted, light amber, at 6c; white, 6½c; Southern, 55@60c per gallon; buckwheat, 5½c. Beeswax, 28@29c.
HILDRETH & SEGELKEN.

SAN FRANCISCO, Oct. 21.—White comb, 1-lb. frames, 13@14 cents; amber, 9@11c. Extracted, white, 5¾@6¼c; light amber, 5@5½c; amber, 4½@5c; dark amber, 4@4½c. Beeswax, good to choice, light, 27½@29c; dark, 25@26c.

Market is more quiet than for several weeks preceding, but is fairly steady as to value. Spot stocks and offerings of both comb and extracted are mainly of amber grades, while most urgent inquiry is principally for water-white, the latter being the only kind meeting with much competitive bidding from buyers. Recent arrivals of honey included a lot of 121 cases from the Hawaiian Islands. The bees of the Islands feed mainly on sugar.

20,000 Pounds

White Extracted Alfalfa HONEY FOR SALE.
Address.
DR. GEO. D. MITCHELL & CO., Ogden, Utah.
46Atf Please mention the Bee Journal.

The Best Bee-Goods in the World....

are no better than those we make, and the chances are that they are not so good. If you buy of us **you will not be disappointed. We are undersold by no one.** Send for new catalog and price-list and free copy of THE AMERICAN BEE-KEEPER; in its thirteenth year; 50 cents a year; especially for beginners.

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W. M. GERRISH, Epping, N.H., carries a full line of our goods at catalog prices. Order of him and save the freight.

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You Will Have to Hurry

You will have to get your inquiries in before Dec. 15 if you secure the 10 percent discount on Dovetail Bee-Hives made of Michigan white pine.

THE WOOD-BRUSH BEE-HIVE AND BOX CO.,
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TREATMENT for
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Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

Bee-Keepers' Supplies OF ALL KINDS *****

Very fine pure-bred BARRED PLYMOUTH ROCK Chickens and Eggs for sale at very low prices.

Langstroth on the Honey-Bee—Revised,
The classic in Bee-Culture—Price, $1.20, by mail.

BEESWAX WANTED at all times.

DADANT & SON,
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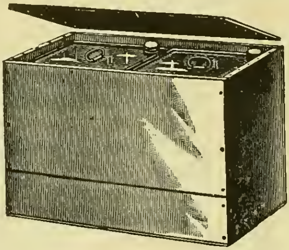
Extracted Honey For Sale!
ALL IN 60-POUND TIN CANS.

Alfalfa Honey

This is the famous White Extracted Honey gathered in the great Alfalfa regions of the Central West. It is a splendid honey, and nearly everybody who cares to eat honey at all can't get enough of the Alfalfa extracted.



Basswood Honey

This is the well-known light-colored honey gathered from the rich, nectar-laden basswood blossoms. It has a stronger flavor than Alfalfa, and is preferred by those who like a distinct flavor in their honey.

Our honey is put up in tin cans holding 60 pounds of honey each. These cans are shipped in wooden-boxes, and should arrive safely. We have nothing but PURE BEES' HONEY to offer, and so guarantee it. **Cash must accompany each order.** All prices are f.o.b. Chicago.

Prices of Alfalfa Honey:
One 60-lb. Can @8c..............$ 4.80
Two 60-lb. Cans (in 1 box) @7½c 9.00
(Larger quantities at the 7½c price.)

Prices of Basswood Honey:
One 60-lb. Can @9c..............$ 5.40
Two 60-lb. Cans (in 1 box) @8c.... 9.60
(Larger quantities at the 8c price.)

A sample of either Alfalfa or Basswood honey will be mailed on receipt of 10 cents; samples of both kinds for 16 cents. (Stamps accepted.)

BEESWAX WANTED—We are paying 28 cents cash or 30 cents in trade for pure average beeswax delivered in Chicago (or Medina, Ohio.

HONEY-JARS—Don't forget to get our prices on all sorts of honey-packages.

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AMERICAN BEE JOURNAL

Published Weekly by GEORGE W. YORK & CO., 144 & 146 E. Erie Street.

43d Year. CHICAGO, ILL., DEC. 31, 1903. No. 53.

Photo by W. Z. Hutchinson.

Grand Canyon of the Colorado River, in Arizona.

(See page 612).

One mile deep, and 13¼ miles across from top of rim to opposite rim; Colorado River is 1500 feet below the lowest visible point shown in picture; nine tents are at a point exactly 1⅞ inches from the bottom of the picture and 2⅛ inches from the right side.

THE AMERICAN BEE JOURNAL

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GEORGE W. YORK.

DEPT. EDITORS,
DR. C. C. MILLER, E. E. HASTY, EMMA M. WILSON

IMPORTANT NOTICES.

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The Wrapper-Label Date of this paper indicates the end of the month to which your subscription is paid. For instance, "dec03" on your label shows that it is paid to the end of December, 1903.

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National Bee-Keepers' Association

Objects of the Association:

1st.—To promote the interests of its members.
2d.—To protect and defend its members in their lawful rights.
3d.—To enforce laws against the adulteration of honey.

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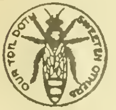
☞ If more convenient, Dues may be sent to the Secretary, at the office of the American Bee Journal.

A Celluloid Queen-Button is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-lapel. It often serves to introduce the subject of honey, and frequently leads to a sale.


OUR TOIL DOTH SWEETEN OTHERS

The picture shown herewith is a reproduction of a motto queen-button that we are furnishing to bee-keepers. It has a pin on the underside to fasten it. Price, by mail, 6 cents; two for 10c; or 6 for 25 cents. Send all orders to the office of the American Bee Journal.

Some Good Clubbing Offers.

As this is the time of year when most subscribers renew their subscriptions, we wish to call special attention to the following, which we are sure will commend themselves to all:

No. 1—	The Bee Journal and Dr. Miller's "Forty Years Among the Bees" (book alone, $1.00)................	Both for $1.75
No. 2—	The Bee Journal a year and Prof. Cook's "Bee-Keeper's Guide," (book alone, $1.20)........................	" 2.00
No. 3—	The Bee Journal a year and Dadant's "Langstroth on the Honey-Bee," (book alone, $1.20)................	" 2.00
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No. 7—	The Bee Journal a year and a "Novelty Pocket-Knife" with your name and address on it (knife alone, $1.25)	" 2.00
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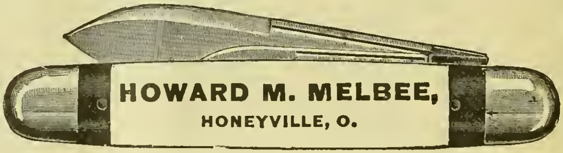
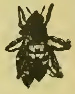
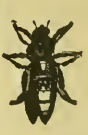
Your Name and Address on one side—Three Bees on the other side.





[THIS CUT IS THE FULL SIZE OF THE KNIFE.]



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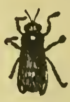
The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the subscriber, and on the other side pictures of a Queen, Drone, and Worker, as shown here.



The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a last-time, with proper usage.

Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the "Novelty" is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the "Novelties," your POCKET-KNIFE will serve as an identifier; and in case of death, your relatives will at once be notified of the accident.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid for $1.25, or give it as a Premium to the one sending us THREE NEW SUBSCRIBERS to the Bee Journal (with $3.00.) We will club the Novelty Knife and the Bee Journal for one year, both for $2.00.

GEORGE W. YORK & CO. Chicago. Ill

☞ Please allow about two weeks for your knife order to be filled.

ESTABLISHT IN 1861
AMERICAN BEE JOURNAL
THE OLDEST BEE-PAPER IN AMERICA

43d YEAR. CHICAGO, ILL., DEC. 31, 1903. No. 53.

Editorial Comments

A Happy New Year to All!

May 1904 be the best and sweetest year of all your bee-keeping lives. May many good new resolutions not only be formed, but sacredly kept throughout the year. Again, we say, A Happy New Year to all!

The Index to Volume XLIII.

This, as usual, occupies several pages in this the last number of the old American Bee Journal for 1903. It seems to us it shows a much larger variety and number of apiarian subjects than ever before. It is a record of a great year in the history of this journal. But we trust it is but an indication of what it will be during the year that is just beginning.

Few realize what it means to compile an index like the one appearing this week, unless having had the experience of getting up an index. We have had it to do almost every year for twenty years. It is a task that is not eagerly looked forward to. It is a tedious one. It is not at all interesting work, but when properly done it is of very great value to all who preserve the complete volume of the Bee Journal.

And what a volume a year's copies of the American Bee Journal makes! Over 800 good-size pages! And all for only one dollar!

Clipping Queens Not a Preventive of Swarming.

For the sake of new members of the American Bee Journal family it seems necessary to say this once in so often. A writer in the British Bee Journal, speaking of clipping queens' wings, innocently says: "I tried this American plan......but the swarm issued the week following." Now, be it known to all and sundry that clipping a queen *does not in the slightest degree prevent the issuing of a swarm.* Clip the wings of a queen, and a swarm will issue from that colony at precisely the same time it would have done if the queen had not been clipped, whether that time be a day or a year later.

The value of clipping consists not in the prevention of swarming, but in the fact that a clipped queen can not go with the swarm if it attempts to abscond, and the swarm will not abscond without a queen. But a little intelligent management is needed with clipped queens, for there is nothing to prevent the swarm leaving with a virgin queen a week or more after the issuing of a prime swarm.

Curing Foul Brood With Formaldehyde.

Geo. E. Hinckley, foul brood inspector for Santa Barbara Co., Calif., claims to have cured foul brood in a very simple manner by means of formaldehyde, merely spraying the liquid three times upon the floor of the hive. He says in Gleanings in Bee-Culture:

> At first I did not have the success that I desired; but I did a little differently each time, and finally have come to the conclusion that it will cure foul brood and black brood if rightly used. It has done the work all right, as I have used it of late. I have treated several apiaries, varying from two to over a hundred colonies in each, and have cured all that I have treated under my present system. Now, for my mode of treatment.
>
> I use a Goodrich atomizer No. 4, and formaldehyde, equal part with water. Go to the hive to be treated and raise the body of the hive in front enough to work so as to spray the liquid onto the bottom-board. The bottleful will be enough for about six hives for one application, which I make three as a course of treatment. I make the applications about two weeks apart, and apply it cold, and do no more than to spray it onto the bottom-board. If it is sprayed onto the combs it will kill all that it touches. The gas dries up the diseased matter in the cell, and the bees clean it out and make everything shine, and the colony soon becomes strong and prosperous; but the hive must have ventilation, or the gas will asphyxiate the bees, and that makes a bad matter worse. If the hive is tight the cover must be raised by placing something between it and the top of the hive, about ¼ inch thick. After spraying the liquid on the bottom-board, set the hive back in place, and the work is done.

That a cure can be effected so easily seems almost past belief; yet it is possible. Coming from one in an official posittion, it is at least worthy of consideration, and if it should prove equally effective in other hands it will be a boon.

Extracted Honey vs. Comb Honey.

The editor of Gleanings in Bee-Culture says: "When sections become more scarce and expensive, and when there are pure-food laws in State and Nation, extracted honey will to a great extent supplant comb honey, and its production will become more general."

That pure-food laws will increase the consumption of honey there can be little doubt; that they will have a tendency to make extracted honey supplant comb may be questioned. The fear of adulteration in extracted honey is at present against its sale; but is there not in the mind of the public just as much fear of adulteration in comb honey? Certainly more has been said in that direction in the public prints. Take away the fear of adulteration in each, and will there be any change whatever in the *relative* demand?

When the material for one-piece sections becomes scarce, four-piece sections can take their place, increasing the cost a fraction of a cent on a pound. Consumers are now willing to pay several cents a pound more for comb honey; would the addition of a fraction of a cent on a pound make any material difference in their preference?

Bees Stinging a Returning Virgin Queen.

Dr. A. W. Smyth says, in the Irish Bee Journal, that "if a young queen returns to the hive, after leaving with a swarm, the workers will sting her at once." Is that so in all cases?

Rules for Grading Honey.

In the Bee-Keepers' Review, R. L. Taylor pays his compliments to the rules for grading honey, after the following vigorous fashion:

> Bee-keepers are further hampered by the set of artificial and impossible rules now in vogue for the grading of honey, which seem framed for the purpose of giving unfair purchasers of honey something about which they may complain with some show of reason in order to mulct the seller in a cent or two a pound, in that he claims to see stain on cappings of fancy honey, and more than the prescribed amount on grade No. 1. Strange to say, these rules entirely ignore quality; and thin honey, with an unpalatable tang, other things being equal, marches fully abreast with the rich, thick, well-ripened article. They strain at a gnat and swallow a camel. Every comb-honey producer knows that not one section in a thousand can be found that will not show some stain, and that a degree of stain that does not disfigure the honey is no detriment, but rather a guaranty of ripeness.
>
> I shall not discuss these rules here, further than to say that any set of rules made to govern the grading of comb honey ought to insist on high quality for the higher grades. Such a rule would at least have a tendency to disseminate a knowledge of the conditions necessary to the thorough ripening of honey, as well as to put honey under

such conditions. I have no doubt that in the end it would increaes the demand for honey, and thereby increase the ease with which honey may be sold.

It may reasonably be supposed that Mr. Taylor refers to the Washington rules, which appear as standing matter in each number of the journal in which his article appears. Some doubt is thrown upon this by his speaking of "the prescribed amount" of stain on grade No. 1, as if more stain were allowed on No. 1 than on fancy honey, whereas, in the rules, there is no distinction, both fancy and No. 1 having "both wood and comb unsoiled by travel-stain or otherwise."

That, however, is not material, for Mr. Taylor's main contention is for quality, and that is left unmentioned in other rules for grading, as well as in the Washington rules. It is undoubtedly true that the man who is best informed will put quality as the first consideration in purchasing honey. Now, let Mr. Taylor frame a set of rules involving quality that shall prove acceptable to the fraternity in general, and a debt of gratitude will be due him.

Why Drones are Driven Out.

That interesting writer, Dr. A. W. Smyth, says in the Irish Bee Journal:

> The workers, in the fall, keep marching and driving out the drones, so as to have them die on the outside of the hive and away from the colony. A dead drone in the hive in winter is very objectionable to the workers. A whole colony of workers frequently die in the hive, but I never detected any unpleasant odor from dead worker-bees, while a dozen or two of dead drones will give off a very disagreeable odor of putrefaction. The poison in the worker-bee becomes disseminated through the body after death, and arrests decomposition.

However it may be in Ireland, a pile of dead bees in this country is by no means always, if ever, devoid of odor. But the idea that the workers drive out the drones so that they may die outside the hive is a new and interesting suggestion. When you come to think of it, what other object could they have? If the drones die because the workers no longer feed them, they would die without any driving, but it is a good deal easier to drive out the living drones than to drag out their carcasses after death.

Number Fifty-Three.

Did you notice that this copy of the American Bee Journal is "No. 53?" This year has 53 Thursdays in it, and so there are 53 issues of the Bee Journal. Really, only 52 are expected of us, but we put this one in for "good measure." We know it will be appreciated by many, as it contains the large and valuable index. So far as we know, no other bee-paper in this country ever issues an extra number. We know that some others print an extra number of pages, but we never knew any of them to issue 13 or 25 in any one year; it is either 12 or 24. But we reach 53 this year! And no extra charge. 848 pages of bee-literature for $1.00! We ought to have 25,000 subscribers right now.

Miscellaneous Items

Mr. Wm. McEvoy, the popular and efficient inspector of apiaries for the Province of Ontario, wrote us as follows Dec. 14:

"I am well pleased with the American Bee Journal, and hope to continue it to the end of my days."

* * *

Swiss Honey is being offered to Americans, it seems from the following which was recently mailed to R. A. Burnett & Co., by Ul. Tuchschmid, who does business in a large city of Switzerland. We print the circular as nearly like the original as possible, both as to language, punctuation, etc. Here it is:

> I beg to offer you Swiss Honey neatest selection from flower harvest, yellow like gold, in cases of 50 glasses, 1 pound each, at 80 frs. a case, comprising packing, free Basle, payable at receipt with Cheque on Switzerland net.
>
> Carriage Basle-New-York frs. 8.20 per 100 Kilogr. (1 case=37 Kilogr. gross). Insurance by land and sea from here to New-York against loss, average, breakage 6 percent which, on your demand, I shall effect here for your account.
>
> This Honey is undoubtedly the finest article of Fancy Grocery; it it is not only a highly exquisite delicacy, but also a remedy for many an outward and inward infirmity, an antiseptic preservative remedy (cleaning wounds, blisters from burning); therefore it is warmly commended by physicians, especially for children. It is for the wealthy as well as for the poor, benefiting them all likewise.
>
> Our quality is in no way to be put upon the same level with the common article of foreign countries; leaving even aside its being a produce of the Alpine flora, its strongly flavoured, incomparable nectar, it is not to be forgotten that with us teachers and parsons in the country are the chief apiarists, who do the business more from sheer passtime and *with the utmost cleanliness*. All our honey gets slung (worked out carefully), no such use as in foreign countries where often comb-honey, together with maggats, nay even rotten brood is pounded, boiled and expressed. Such an article is not only nauseous, disgusting, but at the same time hurtful to health.
>
> In order to serve my customers to the utmost nicety, I have chosen glasses, the nicely printed zink lids of which close hermetically, so there will never be any leakage, however fluid the honey, in whatever position the glass may be; no clammy hands and—last but not least—Swiss Honey may be preserved for a whole generation without undergoing any change.
>
> The patent cases to be shut and opened without any tool, contain compartments so that each glass stands separately. During ten years I have furnished honey to a house in New-York, never a glass has been broken, and yet honey is by 1½ heavier than water or wine. Cases as well as glasses by themselves are of good use.
>
> Incomparable quality, sure packing and its lasting unchanged and palative for years and years, there are the titles to commend our article.
>
> At first sight the price of the article may seem somewhat high, but he who has got acquainted with its superiority, does not mind that little more; Swiss Honey becomes indispensable for him. On the other hand, I could not possibly make any allowance, the produce of the article being limited and prices pretty high at home.
>
> Inviting you to have a fair trial, I remain, Sir,
> yours truly Ul. Tuchschmid.

Of course, honey that "gets slung" may be better than honey that contains "maggats, nay even rotten brood," "pounded, boiled and expressed." We don't know just to what "foreign country" he refers, where honey is taken in that way, but it must be in Europe somewhere, for surely we don't have that kind here.

At any rate, Mr. Tuchschmid is quite enterprising, and has a famous honey, if all his circular letter is to be believed.

Contributed Articles

Oil of Eucalyptus for Bee-Diseases—Cleaning Extracting-Combs.

BY C. P. DADANT.

Mr. Dadant:—I was very much interested in the article on foul brood, on page 696. I was afraid my bees have foul brood, but since reading everything I can find on that subject, I have concluded it is not foul brood. The bees die in the cells and nearly all of them are white, with black heads, and they are full of water. The cappings are not sunken, but are elevated, with a small hole in the center. I want to try your remedy—the oil of eucalyptus. If it isn't too much trouble please answer the following questions:

1. Would it be best to use the oil now, or wait until the queen begins to lay, which will be about the first of February?
2. How much oil will it take to treat 20 colonies five weeks?

Bullitt Co., Ky.

I should not think of sending my answer to the above letter for publication, were it not that the same error has been made hundreds of times, to my knowledge. If the description given of the so-called diseased brood is exact there is no disease at all in this case. It often happens that the bees, from some cause or other which has not yet been made very plain, leave patches of larvæ uncovered at the time of their transformation. That is, they narrow up the cell but fail to seal it, and leave a small opening through which the transforming of an insect may be seen. Sometimes a patch of brood several square inches in diameter will be treated in this way. It has been suggested that the lack of sufficient space between the combs for a full capping is responsible for their action, but I doubt this, as the cell is slightly raised in narrowing it, and, to my mind, this partial covering occupies as much space as the ordinary flat capping. Be this as it may, the fact remains that often the bees will thus leave patches of brood only partly sealed. When the insect goes through its last transforming stage, its eyes become dark first, they have a bluish-black appearance while the remainder of the body is yet white and immaculate. The effect is striking, the black head, with white body underneath and perfectly still condition of the chrysalis, give them the appearance of "silent corpses," to quote A. I. Root. The description given in the above letter answers this condition exactly. If our correspondent will examine the bees when in this condition, he will find that they are not at all decayed, but simply in a state of transformation. So he may rejoice in the fact that his bees have no disease, and that he is not the first one who has made this mistake, of taking a perfectly natural, but not often seen, condition for a disease. I have heard a number of such enquiries, and I am evidently not the only one who has met this question, for A. I. Root, already mentioned, speaks of often receiving enquiries concerning this particular condition of brood, from novice bee-keepers.

I am very glad to see so much discussion of the question of foul-brood. Sooner or later a very positive cure will be devised, so that we may not find it necessary to destroy any part of the hive. We owe thanks to men like Mr. France, who are so pertinacious in seeking remedies and making experiments.

The quantity of oil of eucalyptus to be used must depend upon the size of the hive. If this remedy should prove efficacious in foul brood (which is not yet entirely proven), it should be used in sufficient quantity to scent thoroughly every part of the hive for weeks together. A teaspoonful on cotton will give scent for quite a while, and doses must be repeated as often as necessary. From the experiments I have reported, I am sure it will do away with minor diseases, and whenever we do this we will find that we have much reduced the supposed scope of the true disease.

I cannot but take issue with those who say that the use of fire will ever remain the only thorough remedy for grave cases of foul brood. Some of the worst diseases of the human race have been entirely eradicated from civilized countries, and accidental cases are treated so as to bring about almost positive assurance of cure. It in only a few hundred years since the plague decimated cities in the most civilized portions of Europe. The plagues of Marseilles, of Florence, of Moscow, have become historic by their extent and horror. This plague, which was then called "The Black Plague," was probably none other than the "bubonic plague," which civilized countries fear no more, though it still exists in some uncivilized regions. But at the time when these terrible diseases were raging, there was no other method known of disposing of them than doing away with the sick people. I can still remember seeing, near my old birthplace (Langres), in old France, in the suburbs, a house which had retained the name of "La Maladiere," because in times of plague the sick persons were removed to that spot to fare as best they could. That was the only way they had then of fighting contagious diseases. But we have progressed, and are still progressing, thanks to the enquiring minds of our leaders in science and medicine, and the study of microscopy is one of the great factors in the present progress.

CLEANING EXTRACTING-COMBS IN THE OPEN AIR.

I have just read the expression of opinion of "Our Bee-Keeping Sisters," on page 793, concerning giving extracting-combs to the bees for cleaning in the open air. I am still unconvinced of the advisability of this method. The combs are not all repaired, but rather further damaged by them. The bees have so free an access to these combs that even the neighbors' bees are welcome to the feast. The strongest colonies get the biggest share of the honey, and if there happens to be a weak colony in the neighborhood it seems as if hundreds of inquisitive bees take the opportunity of an uproar to pay them a visit to see whether their stores are well guarded.

I can see no objection to putting the combs back on the hives that we select, to have them cleaned during the night so that there is no uproar, and I still think it is the best way. It is probable, however, that with our deeper frames and very large hives, we have less trouble with bees moving upstairs than with shallow hives, especially as our supers are all shallow, and therefore less attractive to the colony as a residence. Hamilton Co., Ill.

Our Wood Binder (or Holder) is made to take all the copies of the American Bee Journal for a year. It is sent by mail for 20 cents. Full directions accompany. The Bee Journals can be inserted as soon as they are received, and thus preserved for future reference. Upon receipt of $1.00 for your Bee Journal subscription *a full year in advance*, we will mail you a Wood Binder free—if you will mention it.

Different Races of Bees in the South—Smoker-Fuel.

BY JOHN KENNEDY.

ORIGINALLY there was but one kind of bees to be found in this part of the United States, and that was what is known as the black bees. They were considered great honey-gatherers, and feared by all who handled them on account of their cross, irritable disposition. Since the introduction of Italian bees, although to no great extent, there is now a variety of grades, and the genuine black bee is almost a thing of the past.

With the most of them the cross is so far off that nothing but a very close observer would detect it. I have been handling bees for five or six years, having an apiary of about 100 colonies, and in all my dark, or native bees, but few of them are without some yellow, and almost all of them are what I would call brown instead of black bees. While I have some late purchases of Italians and Caniolans, I find among my native bees some with almost as much yellow as the progeny from queens I have bought of reliable breeders.

I notice different writers in the American Bee Journal speak of their three-banded Italians. I think, if I am not mistaken, that all bees are three-banded that I have ever noticed. I have bees from two queens that are perfectly yellow. Then I have what the bee-men call the yellow, clover queens, with dark stripes, that look to me about what a half cross between our native and the Italians would be.

Now, to the point of my information wanted: These Italian bees are not nearly as large as our native bees, when I have always heard the Italian bees were larger. Can it be that I have been imposed upon by queen-breeders in selling me impure stock, or has the climate, or locality, or anything else, anything to do with it? I can not believe such men as I have bought queens of would sell me any "bogus" stock.

How is this: Are all Italians smaller than the native bees of this country? I have bees of eight diffierent shades in the same hive; while some of them have a distinct yellow band, others of the same colony have no yellow at all; thus showing how bees vary in color. I noticed, among my yellow golden Italians, some bees with dark stripes. The Carniolan queens I have purchased recently have not hatched out any bees yet, and therefore I cannot report on their size. It is said they are much larger than the native bees; but if they don't prove to be of larger size than the Italians, they, too, will fall short of representation.

My object of writing this for publication is, that some reader may reply through the columns of the American Bee Journal by the way of comparing notes, for it may be that native bees of the Northern and Western States are smaller than those of this climate; and the Italians I have so far reared from Western queens may be the usual size, and all right. They are the first and only bees of the kind I ever saw; but they are greatly inferior in size to our natives. As to their honey-gathering qualities I can't say, but if we get through the winter, and I have enough to begin the next nectar season, I may be in position to answer, with them side by side, giving all an even chance.

It is strange to me that here in this temperate climate, where the summer constitutes the greater part of the year, the bees cannot give any surplus, and very often don't store sufficient to live through the winter. There must be something radically wrong. It may be in the management, or it may be all attributable to the lack of nectar. It is a fact, known to all the bee-men of this part of the country, that after the first of June, or thereabouts, our bees store nothing more; sometimes they may gather sufficient barely to live on, but to store any surplus is a rare thing.

I notice the different writers in the American Bee Journal speak of different honey-plants their bees gather from through the fall. Such a thing is unknown here, or at least to me. We have fall flowers, but I am not much of a botanist, and do not know the names of our fall flowers. We have them, of course, but it is seldom a bee is seen on them; and when they are it seems to be for pollen. Of course, we know they work on cotton, but that is about all I can see.

I have about come to the conclusion that the only way bees can be handled to any advantage here, unless it be in strictly isolated cases, is to plant forage for them, and the next question arises, What are the plants we could grow here that will furnish nectar? I read about goldenrod in the West as being such a good honey-plant. Why, here the bees hardly ever visit it. There are localities, however, down here along the valley of the wooded part of the Mississippi river, where bees make a success; but out in the hills, where I live, 8 miles from the Mississippi river, there are only a few nectar-bearing plants. If I could get the information as to what to plant for my bees I would solve the problem very soon; but I don't know, and unless some good sympathizer will reply to this, I shall have to remain ignorant.

I love my bees, and have started out to understand their habits and nature as far as possible by close study, and I will be most grateful to any one who will reply to this article. I am going to plant the following this fall to try them: Alsike, crimson, sweet white, sweet yellow, and white Dutch clovers; and next spring, catnip, rape and buckwheat. How will these do, as planned above? I had some buckwheat on hand, but could not plant it until about the middle of September. It grew nicely and bloomed all right, as far as I can tell, but the bees did not seem to care much for it. I thought during such a scarcity here they would simply go wild over it; but I was the only one excited over the matter. The bees took it very calmly, although they worked it for the nectar. I don't think they gathered any pollen from it.

CEDAR-BARK FOR SMOKER-FUEL.

Before I conclude this article, I wish to add an item on smoker-fuel. I notice "Pennsylvania," on page 666, recommends corn-cobs. I believe I have tried a little of almost everything in the last 5 or 6 years of my experience, and have never found anything to equal the bark of the cedar-tree. The outside bark of a live tree can be gathered, and it is always dry, even on a rainy day. It is better than corn-cobs for one reason, especially—it does not create the heat that corn-cobs do; while cobs may last a little longer. You can skin the bark readily from a dead post and store it away in a dry place for future use. Nothing lights so quickly, in the way of wood, as cedar-bark, and it never goes out until it is all in ashes. You can lay the smoker down for half an hour or more without the least sign of fire in it, and give a puff or so and you have the smoke in large volumes. It may somewhat depend on the kind of smoker. I use the Corneil, improved. Cedar-bark is the fuel for that smoker.

Beginners, and especially lady bee-keepers, generally use too much smoke, and, if I will be excused for giving advice, I will recommend that no more smoke than is absolutely necessary should ever be used. It is a fact with me, and I can't see why it should not be so in all cases. You can handle bees so as to require little or no smoke. A friend visiting me offered to wager me I could not enter a hive and remove a frame without smoke. I took it up, but I selected a hive into which I had recently introduced an Italian queen, and had handled considerable. I not only removed one frame, but eight, and found, and pointed out, the yellow queen to him. You can make bees gentle by handling them properly. Smoke subdues them, of course, but it also irritates them. Adams Co., Miss., Oct. 19.

The Movable-Frame Hive vs. the Box-Hive.

BY "A VIRGINIA BEE-KEEPER."

I WAS very much and agreeably surprised to find my letter on "Box-Hives vs. Modern Hives," (see page 750), noticed and commented on by so eminent a bee-keeper as Dr. Miller, on page 792. As he has asked a good many questions in his kindly comment, perhaps I will be allowed space enough to try to answer some of them, though I would like to preface my remarks by mentioning that I feel very much like a school-boy suddenly confronted by the head master, and asked to give him information on subjects which are his especial forte.

First, let me quote a passage from my original contribution: "To illustrate the expense connected with the change from box-hives to modern hives, *I give my own experience*."

This may be another question of "*locality*," but the facts in my own case were substantially as set forth in my letter. That is to say, when I contemplated making the change to modern hives, and after I had laid off the ground for my apiary after having decided on the number of colonies I would keep and the kind of hives I would use, I made a rough estimate of the cost of the entire necessary supplies for an apiary of 50 colonies. This estimate I discussed with the owner of the hives that I had on shares, and proposed that the change should be made in the next four years, and also proposed that he should pay one-half of the expenses and I would pay the other half, while the surplus honey should be divided between us evenly. He decidedly and emphatically refused, and I then offered to buy his bees in the box-hives, as I did, and which I considered a much better proposition for me. I stopped at four years, because I do not, at present, intend to allow my apairy to grow larger than that, spring count, even if I have to destroy swarms, queen and all.

"Are all the items given, fairly to be charged to box-hives?" I suppose you mean charged to modern hives? I think I should be inclined to say "Yes" to this question, as it would be hardly worth while to make the change at all to movable-frame hives unless one expected to use rather more enlightened methods than those usually in practice by owners of box-hives. You say, "The items must be charged, not to movable-frame hives but to improved methods of bee-keeping." Well, for that matter the movable-frame hives themselves should also be charged to "improved methods of bee-keeping."

In this locality it is almost a misnomer to call the farmers bee-keepers, as they generally fail to keep them, losing most if not all swarms, and little or no attention is paid to bees, and little or no honey ever taken from them. I know of a few "patent" bee-hives in use, none of which I would accept as a gift, and several scattered box-hives. Thus, I should be inclined to say that, barring the expense, which I only stated as *one* reason against modern hives, the nexe main reason is that the farmers here do not give the time neccessary to run an apiary successfully, and therefort would be very little better off with all the latest modern hives and appliances than they are with their old boxes.

I may add here, that for 8 or 9 years I had been desirous of starting an apiary, but had been deterred by the initial expense of modern hives and appliances; and the first 5 modern hives that I ever bought were purchased quite unexpectedly, and almost accidentally! Augusta Co., Va.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

As to Answers by Mail.

Every now and then some correspondent asks a question which he desires to have answered by mail instead of having it answered in this department. Sometimes he seems to think his question is not of sufficient importance to be answered in print, and so he will be satisfied with a written answer. If the question is worth answering at all it is worth answering here, for any one who pretends to conduct a department of this kind ought to consider himself a fair target for any question on bee-culture not fully answered in the bee-books, and he should be ready to answer it here, *if* he can.

A larger number prefer a private answer because they think they might get it in less time. That might or might not be, for I am generally so crowded that a letter I am not obliged to answer may be delayed some time, whereas it is a matter of business to answer questions in this department as promptly as possible, no matter how crowded I am. Even if there is an abundance of leisure, it will easily be seen that if it would be right to answer one by mail it would be right to answer all in the same way, and that would take a good many days of every year without pay for the work.

Another reason for answering here, is so that a number can have the benefit of the answers, whereas an answer by mail would be limited to an individual.

A letter before me gives, however, a reason differing from all others. The writer says the answers in the Bee Journal are uncertain and unsatisfactory, and so he wishes a private answer. I see no reason why answers in this department should be less certain than those sent in a private letter. As to their being unsatisfactory, I am painfully conscious that such is the case sometimes, from the simple fact that I don't know enough to answer them any better. But what reason is there to suppose that any more satisfactory answer would be sent in a private letter? I am paid for answering questions in this department, and would get nothing for a private answer. Do people generally work better when they work for nothing than when they get pay for their work? No, whatever may be their defects, the answers in this department are the very best I know how to get up, and I couldn't improve them for private circulation. But with study and practice I may improve; and hope that in the future this department will be a shade better than in the past.

Send on your questions and I'll give you the best answers I have in stock, but don't ask me to make an exception in your case as to the place for answering.

C. C. Miller.

Hives and Management for Comb Honey.

1. What consideration led you to change from the 10-frame hive? This would have been a valuable point in "Forty Years Among the Bees." Please give me this answer as exhaustively as possible. I am running 150 colonies for comb honey, and am ready to purchase that many hives, hence the question above.

2. Do you use "double deckers" with all your colonies up to the honey-flow?

3. If you have but 8 frames of brood at the commencement of the honey-flow, where is the advantage of "double deckers" if the same amount can be secured in a 10-frame hive? I had 8 frames of brood in all my colonies at the commencement of the flow. I fed 1200 pounds of sugar in Doolittle feeders, however.

4. You speak of much swarming the season just past; I thought you practiced forced swarming, examining colonies every 10 days for queen-cells. Well, how did you manage swarming *this* season? In your late work you speak of several methods not yet tested. What is the method you *depend* upon in the management of swarming?

5. Is there any method superior to hiving or brushing on 5 frames with starters? In practicing this method the past season, when white clover produced more pollen than honey, I had several hundred sections spoiled by pollen and brood, notwithstanding I used full sheets in sections. The pollen in the sections was not always accompanied with brood. Some of my finest cases of comb honey had pollen exclusively, no brood at all. Comb-building was very slow during a large period of the honey-flow.

6. In practicing forced swarming, I think the hatching brood should be transferred to the forced swarm so gradually as will keep the forced swarm in about the same condition as the colony from which it issued would have been in, had it had no inclination to swarm. The two drives, at intervals of 10 days, will not accomplish this result. How about shifting the parent colony every few days to the right, left, rear, and top, till most of the hatching brood is transferred from the parent colony to the forced swarm? How often should this shifting be done? I have practiced this to some extent this season, having scarcely a swarm issue from the forced swarm, though swarming was "furious," having had 16 in the air one Lord's Day by 10 o'clock.

7. On the 5-starter plan, I think the forced swarm, at the close of the honey-flow, should be transferred to the parent colony, which should have had just enough bees left (with a young queen) to protect the combs. After disposing of the old queen in a forced swarm, how should we proceed so as to get the forced swarm back to the parent colony, so as to have the brood and queen out of the five-starter combs into the parent hive?

8. As to the question of putting the second super above or under the first, I will say from a pollen-and-brood-in-sections standpoint, put the empty super above. I believe that had I practiced the reverse this season I would have had half of my supers with more or less pollen; but even as it was I had plenty of both in the sections, because the first super had but full sheets instead of combs half filled with honey.

9. In regard to wax-larvæ injuring sections, I will say that when the *plain* sections are packed in shipping-cases without fumigation, the wax-larvæ are about equal in some instances to an uncapping-knife. I have seen the entire face of a section uncapped almost completely. Would a teaspoonful of carbon-bisulphide poured into a shipping-case after it is filled minus one section, then the missing section replaced and the lid nailed on, be sufficient to destroy all eggs and larvæ? Does the bisulphide kill the eggs?

10. How does it come about that while I have much swarming, my neighbor, 50 yards away, has practically no swarming among his blacks year after year, although they are so crowded for room that they build comb on the outside of the hive? I believe it would pay to rear queens from his stock for a non-swarming strain, or else ferret out the conditions peculiar to him that begets such results.

11. How many cubic feet per colony is required in cellar-wintering? I am thinking of putting the bees indoors.

12. And now for wintering in southern Ohio: A gentleman conceived the idea of banking his colonies to the top of the brood-chamber, and having packing on top of it. The result after several years has been a uniformly splendid wintering, so that colonies not protected would not compare with them the following season for strength and profit.

13. I am surprised at your using the Hubbard press and Daisy foundation-fastener, when the Rauchfuss is so superior. I can fold and foundation 3 sections per minute.

You will have to excuse me for the fusilade of questions, suggestions to questions, etc., for I have been 20 years among the bees, and have scarcely asked a question. No wonder I am no further along. My crop was only 2 tons from 100 colonies, with the prospect of feeding one ton of sugar. Increased 50, however. Ohio.

Answers.—1. I changed partly to be in fashion, partly because hives and supers were lighter to handle, and that bees might sooner finish up work in the smaller super. The 10-frame hives were not large enough at all times, and two stories of 10 frames each were too large.

2. No, only where they are actually needed. Some years few may be needed, some years many. So long as a colony has plenty of room in 8 frames there's no use in giving more, but it's a draw-back to restrict them to 8 when they need more.

3. By referring to my first answer you will see some advantages of 8 frames, even if 10 frames would hold all the brood, as lightness of handling hives and supers, etc. To some this matter of heavy or light handling is a small thing; to others it is very important. *If* you have but 8 frames of brood, never going beyond that, the case would be different, but by giving two stories you will often go beyond the capacity of the 10 frames, having 11 to 14 frames of brood.

4. As a matter of fact I don't *depend* upon anything, for lack of something entirely dependable. The past season watch was kept for queen-cells. If only eggs were found in cells, they were destroyed, and some colonies were satisfied to go through the whole season without getting any farther than to have eggs in cells. Such colonies are likely to give very satisfactory results. Some years a goodly number of colonies will not even go as far as to have eggs in cells, but last season was so badly exceptional that I'm not sure whether there were any of that kind. If upon the next visit cells were found well-advanced, perhaps sealed, it was pretty evident that the bees meant business, and would be likely to swarm before the next round. Then perhaps a swarm was shaken. Perhaps the queen was removed—killed if not entirely satisfactory in every way, otherwise put in a nucleus—and at the next round all cells were destroyed and a queen given. If a young queen was given that had just begun laying, no more attention was given to that colony for the season; if their own or any other old queen was given, they were further watched. Sometimes, when in a big hurry, cells were destroyed even when well advanced; and in that case the queen would likely turn up missing at the next visit. A young laying queen was given in her place and that colony counted settled for the season. I think that covers most of the cases, for some other things were tried on so small a scale as not to be worth relating. You see, I'm not very thoroughly settled in the matter, and perhaps never will be. It may be said in passing that as a matter of course there were cases in which cells were started for superseding instead of swarming, but one could not easily tell, and the safer way was to consider all cells as meant for swarming.

5. Shaking or brushing upon 5, or any other number of frames, is in my judgment not to be compared with the plan of having a colony go through the season without making any preparation whatever for swarming. Neither does it compare in results, I am afraid, with the plan of letting a colony go queenless 10 days and then giving a queen that has just begun to lay. *If* your large amount of pollen and brood in the sections was due to the fact that 5 frames with starters were given, then the plan of having a larger number of frames, or having them filled with foundation or drawn combs, would be superior.

6. My plan of working involves an objectionable amount of labor; I'm afraid shifting frequently the old hive would be still worse. I don't know just how it would work, and I don't know how often the shifting should be

done. I gained about the same end in what seems to me a more satisfactory way, with part of my shaken swarms. Instead of giving them empty frames, I gave them combs that had been shaken from other colonies ten days previously, and made no second drive. That gave them the increase of bees gradually and naturally, and I didn't see but it worked just as well as to give empty combs.

7. If you mean you kept the forced swarm on five combs throughout the season, I shouldn't expect good work in supers. Allowing, however, that you had done so, your question is simply one of uniting at the close of the season, and I would unite the two as in any other case.

8. It is quite possible that where bees carry much pollen into the sections there may be less carried into empty sections above than below, but that is a factor I have not had to take into account, not being troubled with pollen in sections.

9. I can see no reason why wax-larvæ shou'd be any worse in plain sections than in others. A teaspoonful of carbon would be enough if confined, but would the case fit close enough? Both eggs and larvæ are killed.

10. I don't know why the difference. Does he get as much as you? Possibly his bees are too lazy either to store or swarm. Possibly there's something about your management that favors swarming, and it is possible that one right on the ground might discover the trouble—possibly not.

11. Something like 10.

12. I see no reason why banking colonies should not be a good thing, although it might be a little hard on the hives.

13. What one is accustomed to doing is likely to seem best; but if only 3 in a minute is your gait we would hardly want to follow in this locality, as we more than double that rate of speed.

So long as you ask questions in so intelligent a manner, your questions will always be welcomed; but don't you think it will be better to have your questions distributed along through the years rather than to wait again till the year 1923, and then send them all in a bunch?

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

The Lady Warwick College.

The British Bee Journal makes interesting mention of the work of the Countess of Warwick, as follows: "To train educated women in what belongs to the lighter side of agriculture—namely, dairy work, market gardening, poultry farming, bee-keeping and fruit-growing—was the idea of the Countess of Warwick, and was carried out by the founding by her of the Reading Hostel in 1898."

So great was the success of the enterprise that larger accommodations were needed, and for this purpose Studley Castle, Warwickshire, was secured, and last October the change was made, the name being changed from "Reading Hostel" to "Lady Warwick College."

The building finely accommodates 60 students, the grounds contain fruits and flowers, with 400 feet of glass, and the country around seems well suited to bee-keeping. Altogether it is a place where a young woman may be very happy in preparing herself for an independent as well as a useful life, that will allow her much of what is too often denied to the weaker sex—the blessings of the open air. Why could not some woman of wealth, on this side the water, erect for herself a monument of the same kind?

The British Bee Journal says: "There is no doubt that many women would be able to undertake the work taught at the college if they only knew how. Fruit-growing and bee-keeping must go together, and we know women can be successful in these branches, because we have seen some of the best results obtained by them."

Hatching Eggs Over Bees.

Dear Miss Wilson:—You will excuse my bad writing, as you see I have lost one eye, and don't seem to get a glass for the other one that I can see as I ought. You don't know what an inconvenience it is, and I sincerely hope you never will lose your eyes.

Can any sister, or any one else, give the year and number that had the article in it about hatching eggs over the bees? I was not interested in chickens at that time; I read it, but I don't remember how it was headed, so I fail to find it. I have looked the indexes over of the past three years, but fail to find it, not knowing what the heading was. I remember it told how to prepare the nest and all. Perhaps the sister that was going to try it herself could tell. Of course, she read it, too, or she would not have tried it. There are a number of sisters that I am anxious to hear how they succeeded. I hope they will let us know soon their success.

I will tell, as soon as I get time, about my bees, but I have been so busy taking care of my crops and making a chicken yard and house, and fixing my pigeons' place, that I could not take the time to make a report. And losing my right eye I can not write at night, but I hope to have time before long. Mrs. Sarah J. Griffith.

Cumberland Co., N. J., Oct. 26.

It may be well not to expect too much from using bees instead of biddies for hatching chickens. If any of the sisters—or, for that matter, any of the brothers—have tried it, will they kindly report whether it was a success or a failure.

Mild Weather With Good Sleighing.

The American Bee Journal comes to us as a weekly visitor to relieve the monotony of the winter hibernating. I enjoyed that trip to Los Angeles, as told in the Journal. I have tried putting in practice some of the many pointers in the Journal. With what degree of success, next summer will tell better.

I have three new queens—Mrs. York, Mrs. Davis, and Mrs. Doolittle. "Children" all look alike. Shouldn't think the mothers could tell them apart. I can't.

We are having very steady mild winter weather, with beautiful sleighing. Mrs. D. W. Brown.

Erie Co., Pa., Dec. 10.

You say the children all look alike, and seem to think that on that account the mothers can't tell them apart. Perhaps the mothers don't depend at all upon looks, but upon the odor. Do you suppose the mothers have names for all the children?

Why Not Help a Little—both your neighbor bee-keepers and the old American Bee Journal—by sending to us the names and addresses of such as you may know do not now get this journal? We will be glad to send them sample copies, so that they may become acquainted with the paper, and subscribe for it, thus putting themselves in the line of success with bees. Perhaps you can get them to subscribe, send in their dollars, and secure for your trouble some of the premiums we are constantly offering as rewards for such effort.

◆

"The Hum of the Bees in the Apple-Tree Bloom" is the name of the finest bee-keeper's song—words by Hon. Eugene Secor and music by Dr. C. C. Miller. This is thought by some to be the best bee-song yet written by Mr. Secor and Dr. Miller. It is, indeed, a "hummer." We can furnish a single copy of it postpaid, for 10 cents, or 3 copies for 25 cents. Or, we will mail a half-dozen copies of it for sending us *one new* yearly subscription to the American Bee Journal at $1.00.

◆

Please send us Names of Bee-Keepers who do not now get the American Bee Journal, and we will send them sample copies. Then you can very likely afterward get them subscriptions, for which work we offer valuable premiums in nearly every number of this journal. You can aid much by sending in the names and addresses when writing us on other matters.

◆

Amerikanische Bienenzucht, by Hans Buschbauer, is a bee-keeper's handbook of 138 pages, which is just what our German friends will want. It is fully illustrated, and neatly bound in cloth. Price, postpaid, $1.00; or with the American Bee Journal one year—both for $1.75. Address all orders to this office.

Index to Volume XLIII.

SUBJECTS.

Abdomenless bees 451
Absconding bees....168, 249, 318
Absorbent covering for bees.... 195
Across the Mediterranean.... 558
Adel bees 728
Adulteration of honey....584, 806, 822
Advertising honey....643, 723
Advice to bee-keepers 231
Alcoholic drinks with honey.... 803
After swarming....153, 281, 371, 457, 569
Age of bees.... 195
Alfalfa. 67, 89, 94, 211, 215, 296, 313, 317, 318, 326,
345, 393, 395, 410, 460, 484, 505, 556, 682 702
Alfalfa pest.... 553
Alsike clover....234, 340, 381, 766
Amateur bee-book 58
Amount of honey gathered by a bee 568, 654
Annual crop of honey.... 568
Ants and bees....301, 409, 431, 443, 585, 707
Ants and clipped queens 25, 346
Apiarian errors.... 535
Apiarian exhibit at St. Louis.... 775
Apiarian statistics 184
Apiary garments.... 73
Apiary—symmetry of.... 515
Apicultural education.... 771
Apicultural suggestions.... 436
Apiculture in Germany vs, United States....104, 423
Apifuge super-clearer....557, 665
Apple-blossom honey.... 371
Arranging hives for certain space.... 634
Artificial pollen.... 218
Aster 667, 813
Associations of bee-keepers.... 633
August bees the next spring 74
Automobiles for out-apiaries....500, 740
Average per colony....102, 216, 435, 809

Bacillus alvei and mesentericus 61, 519
Bacteria for plant growth.... 824
Bait-sections 90, 131, 262, 312, 516
Balled queens..73, 275, 291, 414, 537, 563, 651, 682, 707
Banana sandwiches.... 697
Barb's (J. S.) apiary.... 84
Basswood for hives and brood-frames....31, 634, 763
Basswood growing....183, 186, 217, 280, 285, 467
Basswood honey....36, 40
Bay View Reading Club 697
Bears in the apiary....661, 682
Beauty and goooness a span 57
Bee-brush.... 652
Bee-cellars....87, 104, 291, 313, 357, 428, 552, 653
Bee-escapes....28, 121, 603, 679
Bee-flights in winter 232
Bee-hat.... 797
Bee-houses.... 106
Bee-keepers and printers'-ink 437
Bee-keeping family 216
Bee-keeping for women.... 580

BEE-KEEPING IN—
  Alabama 766
  Arizona.... 667
  Arkansas.... 538
  Ash Valley, Utah.... 548
  British Columbia.... 300
  California....75, 93, 218, 517, 749, 756, 809
  Cuba 12, 77, 204, 323
  Florida 333
  Germany....217, 558
  Illinois.... 83
  Iowa 105
  Kentucky 635
  Nebraska.... 526
  Nevada.... 604
  North Ontario 189
  Oregon 58, 174, 187
  South 83, 88
  Texas....140, 348, 549, 615, 650, 714, 809
  Washington....48, 58, 110, 174, 187
  Wisconsin.... 683

Bee-paralysis..325, 331, 362, 378, 404, 531, 535, 649,
650, 732, 748.... 761
Bee-pasturage—sowing for....10, 23
Bees and fruit....54, 309, 771
Bees as messengers.... 307
Bees carrying down comb honey.... 9
Bees carrying pollen.... 83
Bee-scout 787
Bees feeding each other....532, 535
Bee-shed 42, 332, 795
Bees humming in cellar 10
Bees in a snowdrift 200
Bee-smokers....35, 215, 372, 412, 444, 451, 484, 488
Best bees....138, 153, 347, 619, 781
Bee-stealing in Denver.... 588
Bee-stings 499, 584, 611, 696
Bee-sting remedies....27, 138, 468, 537, 667
Bee-stings for rheumatism 536, 557, 583
Bees under glass in April.... 233
Bees under snow 86
Beeswax....297, 323, 483, 564, 681, 683, 692, 779, 823
Bees working in a tent.... 51
Bee-tent 794
Bee-terms—correct use of.... 339
Beet or cane sugar....298, 349
Bee-tree property of the land-owner.... 820
Bee-veils.... 215
Bee-way and plain sections.... 469
Beginners in bee keeping 582
Beginning with bees....393, 421
Big honey harvest expected 149

BIOGRAPHICAL—
  Austin, H. W.... 372
  Dittmer, Gus.... 821
  Hyde, Homer H 789
  Lewis, George B.... 660
  Muth, Fred W.... 772
  Pettit, Morley 356
  Pouder, Walter S.... 741
  Smith, J. Q.... 485
  Toepperwein, Udo.... 628

Black bees vs. Italians.... 206
Black brood....278, 758
Black lizards and bees.... 422
Blacks vs. Italians.... 492
Blind Sister's report.... 617
Blue thistle.... 682
Bologna-sausage honey-package....211, 296
Bottling honey.... 564
Bottom-boards....215, 341
Bottom starters in sections....88, 200
Box-hives.... 3
Box-hives vs. modern hives....750, 792, 838
Box-hives vs. straw skeps.... 772
Brace-combs.... 339
Breeding-colonies.... 756
Breeding from freaks.... 211
Brood-chamber crowded with honey.... 520
Brood-chamber—size of....69, 331
Brood clear to top-bars.... 116
Brood-combs 25, 131, 794
Brood—taking care of it....217, 227
Brothers go a-beeing.... 540
Brushed swarms.... 558
Brushing bees off combs.... 126
Brilliantine for the hair....182, 247
Brood-frames....422, 574, 770, 804
Brood-rearing in Cuba.... 428
Buckwheat cakes and honey.... 708
Bulk honey....86, 115, 138, 259, 319, 442, 558, 631,
724.... 789
Bunched swarms.... 415
Burnt honey—feeding.... 346
Busy bee-keeper.... 403
Butter and honey.... 51
Buying bees.... 650

Caged queen outdoors.... 777
Caging queens.... 505
California National Honey-Producers' Association.... 132
California Welcome (poem).... 762
Canadian Experimental Bee-Farm.... 803
Canadian Honey Exchange.... 3
Canadian honey harvest.... 558
Candy for queen-cages....14, 447
Candy for winter feeding.... 26, 154, 824
Cans vs. barrels for honey.... 745
Capping honey.... 584
Cappings gnawed....232, 456
Cure of combs.... 585
Carniolan bees....201, 698, 726, 747, 778
Carniolan-Italian bees....140, 233, 382, 573
Carpenter's (A. B.) apiary.... 258
Carpet-grass....163, 243
Carrying down honey in the fall.... 233
Carrying drawn-out sections by rail.... 102
Castor-oil and honey.... 796
Catalina Island, Calif.... 645
Catnip and catnip honey....43, 59, 121, 186, 205,
281, 382, 716, 765.... 823
Cellar-wintering of bees....43, 69, 158, 285, 341,
590.... 723
Cell-cups.... 564
Cement.... 499
Central honey-producer's exchange.... 7
Chaff-hives....89, 213, 313, 436
Chamberlin's (C. C.) apiary.... 338
Changing queens in the fall.... 619
Changing supers.... 680
Chapped hands remedy.... 121
"Charge" of Dr. Gallup.... 44
Chayote.... 264
Chicago hotel and bees.... 741
Chunk honey....85, 115, 138, 259, 319, 442, 638, 789
Citrus Fruit Exchange.... 613
Cleaning smokers.... 35
Cleome.... 234
Clipping queens' wings....42, 69, 75, 115, 195, 203,
217, 359, 487, 572, 649, 827.... 835
Cloth over frames.... 237
Clovers.... 218
C. O. D. by mail....843, 746
Cold knife in extracting.... 747
Colonies to count as producers.... 102
Colonies starving.... 611
Colonies killing its bees.... 553
Colorado Honey Producers' Association.... 19
Color of honey.... 608
Comb foundation....37, 54, 122, 309, 383, 451, 515, 586
Comb foundation in sections.... 9
Comb foundation separator.... 137
Comb-honey management....122, 729, 839
Comb honey or extracted honey?....682, 698
Combs a solid mass.... 233
Combs—bees cleaning out.... 392
Combs coloring honey 89
Combs from dead colonies.... 218
Combs from diseased colonies.... 505
Comb vs. extracted honey....58, 521, 549, 835
Combs vs foundation.... 531
Confining bees for shipment.... 447
Convention exhibits....326, 340, 442

CONVENTION REPORTS—
  Arkansas Valley, Kans 804
  Business Association (Tex.).... 532
  California 52
  Chicago-Northwestern 373, 381, 804
  District (Ont.) 357
  Elgin Co., Ont.... 804
  Fillmore Co., Minn.... 127
  Hamilton Co., Ohio....220, 638
  Minnesota.... 804
  National....5, 21, 597, 714, 805, 814
  Northern Michigan.... 357
  Northeastern Wisconsin....174, 685
  North Texas.... 283
  Ohio 740
  Ontario, Canada.... 37
  South Dakota 157, 542
  Texas....533, 598, 599
  Utah 4
  Vermont.... 309
  Wilson Co., Tex.... 532
  Wisconsin.... 325
  Worcester Co., Mass....130, 254

Convention season.... 701
Controlling fertilization of queens.... 37
Co-operation among bee-keepers....214, 253, 291,
325, 373 [illegible], 488, 552, 597, 613, 643, 697.... 775
Co-operation among fruit-growers....422, 613
Cork for winter packing.... 108
Corn-tassels—honey from 538
Cost of bee-supplies 682, 685
Cotton as a honey-plant.... 349
Coverless colony rained on 473
Crooked combs 154, 314
Cross bees and light clothing....485, 701
Crossing bees....732, 778, 810
Cross Italian bees....58, 761
Cuban honey competition.... 227
Cuban honey in the spring.... 329
Cutting foundation with electric wires.... 686
Cutting out queen-cells....168, 551, 665, 713
Cyprian bees.... 778
Damp cellar 153
Danzenbaker hives.... 234
Dead bees on cellar floor.... 120
Dead brood.... 54
Deaf lad and bees.. 461
Dealer's rights.... 180

DEATH NOTICES—
  Barber, Mrs. A. J.... 329
  Gallup, E.... 259
  Nebel, John.... 331
  Newman, Thomas G.... 178, 194
  Rambler, (J. H. Martin).... 68
  Theilmann, Mrs.... 290
  Touchton, Rufus.... 404

Debt of all to all.... 537
Demand for honey varying.... 260
Desertion of forced swarms.... 488
Destroying queen-cells to prevent swarming.... 547
Destroying queens.... 659
Difference in bee-keepers.... 701
Difference in bees....520, 552
Difference in honey.... 747
"Disappearing trick".... 19
Disease germs.... 648
Distance bees gather.... 473
Dividing an apiary between two localities.... 355
Dividing for increase....26, 78, 280, 372, 378, 443, 601
Division-boards....505, 521
Doing things on time.... 487
Don't invite trouble.... 493
Drawn combs....138, 249, 361
Drawn-out combs.... 715
Dress for women bee-keepers....218, 520, 603
Driving bees.... 820
Drone-brood in extracting supers.... 457
Drone comb and brood....106, 249, 297, 347, 361,
377, 537.... 810
Drone-excluding zinc.... 778
Drone-laying in queenless colony....296, 698
Drones....195, 246, 345, 471, 588, 723, 755, 777, 836
Drone-traps.... 553
Dropping the bee-paper in winter.... 25
Drowning queens....542, 550, 650, 665, 787, 810
Dummies 138
Duty on honey to Canada.... 131

Easy bee-keeping.... 85
Eating eggs and destroying queen-cells.... 521
Education of apiarian writers.... 566
Empty combs....515, 585
Emptying barrels of granulated honey..... 323
Enameled cloth.... 410
Entrance guards.... 233
Entrance-reducer.... 260
Ephesian coin fable.... 632
Eucalyptus honey and trees....671, 788, 808
Excluder zinc.... 394
Excrements of bees.... 567
Experience with bees....8, 504, 540, 574, 606, 632,
635, 807.... 825
Extra combs for winter.... 233
Extracted honey....53, 68, 282, 326, 501,
633, 645.... 835
Extracting combs....86, 87, 501, 794, 836
Extracting-frames....138, 201, 233, 682
Extracting from sections.... 611
Extracting honey....43, 58, 218, 358, 521, 538, 585, 663
Extracting sections.... 516
Extracting-supers....228, 663, 693
Extractors.... 122
Facing hives 330
Fall introduction of queens.... 73
Famine-stricken swarm.... 393
Farm bee-keeping.... 680
Fastening foundation....57, 108, 136
Feces in the hive 99
Feeding back extracted honey 493
Feeding back to produce comb honey....469, 618
Feeding bees ..45, 53, 78, 89, 90, 136, 137, 139, 153,
154, 201, 202, 217, 218, 231, 236, 246, 249, 266,
278, 297, 298, 326, 329, 331, 335, 344, 346, 348,
358, 360, 377, 411, 505, 549, 569, 584, 585, 619,
664, 698, 739, 763, 778, 783,.... 823
Feeding glucose....584, 682
Feeding honey from dead colony 168
Feeding meal in spring.... 339
Feeding queens 443, 467, 567
Feeding sour or tainted honey....181, 265, 266
Fence-rail colony.... 21
Fence separators.... 682
Fertilization of queens in confinement....115, 798
Filberts.... 106
Filling shipping-cases.... 89
Filling syrup in combs.... 180
Finding queens....501, 507, 818, 714
Fisher's (V. H.) apiary.... 68
Flies and mosquitoes—getting rid of.... 505
Flights for cellared bees....155, 162
Floral bacteria.... 761
Foot-path to peace.... 273
Foot-power saw.... 202
Forced swarming....37, 55, 61, 63, 67, 104, 123,
130, 139, 156, 186, 207, 227, 281, 294, 362, 374,
393, 429, 439, 453, 469, 488, 507, 544.... 598
Formalin or formaldehyde and foul brood..218,
227, 265, 291, 329, 364, 403, 435, 595, 659, 666,
670, 676, 699, 700, 773.... 835
Foul brood ...25, 37, 90, 108, 147, 148, 154, 169,
180, 197, 201, 217, 218, 219, 237, 238, 244, 250,
260, 261, 265, 276, 292, 300, 325, 345, 358, 391,
393, 395, 489, 499, 502, 517, 519, 542, 601, 611,
618, 619, 633, 6[illegible]0, 659, 682, 696, 698, 742, 758,
773, 776, 794, 809.... 835
Foul brood inspector.... 682
Foul brood legislation.... 328
Foul-broody hives.... 682
Four-piece sections.... 584
Foundation in sections—amount of.... 72, 88
Frames—depth of, etc....69, 122, 259
Frothy honey.... 357
Fumigating honey 263, 297, 346, 783
Furniture polish 185
Future of bee-keeping 574
Future of sections.... 691

Gallee's (Peter) apiary.......162
Gallup's (Dr.) bees good ones.......605
Galvanized-iron honey-tank.......106
Gasoline as a motor.......115

Getting bees from trees, roofs, etc......169, 249, 510, 551, 568, 60[illegible], 618.......634
Getting bees out of sections or off combs....467, 585.......761
Getting people to use honey.......504
Getting pollen out of combs.......296, 398
Getting ready for the next season.......39
Getting rich in the bee-business.......634
Ginseng and bees.......44, 46, 76
Giving bees a flight.......237
Giving extra supers.......571
Giving frames of brood.......307
Glucose—feeding bees.......453
Glycerine candy for queens.......665
Gnawing foundation.......538
Goldenrod.......810, 813
"Good" candy—recipe for.......138, 238
Good honey crop.......44[illegible]
Grading honey.......67, 835
Grand Canyon of the Colorado.......612, 677
Granulated corn-sugar feeding.......202
Granulated honey for the market.......25, 488
Granulated honey in extracting-combs.......154
Granulation of honey.......26, 307, 788, 810
Grass for confining moved bees.......116
Green's (Wm W.) apiary.......162
Growing timber in Germany.......327

Habits of bees.......519
Hanging out while swarming.......296
Hatching eggs over bees.......307, 552, 840
Hat-pin and bees.......73, 120, 184, 222
Hat-swarm of bees.......338
Heddon patent expired.......116
He hurt himself.......468
Helping a colony with other brood.......227
Heredity in bees.......70
He understood him.......101
Hickory smoke and foul brood.......217
Historical.......391
Hive extraordinary.......430
Hive-covers.......275, 362, 493, 505, 681.......756
Hive-roofs.......798
Hives.....43, 60, 118, 121, 122, 153, 166, 169, 182, 185, 218, 247, 342, 347, 357, 442, 485, 552, 566, 666, 728, 778, 794, 797, 823.......839
Hives-stands.......747
Hive-staples.......755
Hives where bees died.......249
Hiving swarms....232, 317, 361, 410, 456, 551, 555, 5[illegible]8.......602
Hoffman frames.......169
Home-made grape-nuts and postum.......524, 633
Honey and fried bacon.......334, 442
Honey at agricultural fairs.......14
Honey-barrels.......163, 317
Honey-bees—use and abuse of.......822
Honey-boards.......94, 233, 340
Honey-cakes.......568
Honey candying in unfinished sections.......169
Honey-cans—large openings for.......675, 744
Honey crop of 1903.......483, 675
Honey exchanges.......105, 216, 597 691
Honey exhibits.......486
Honey-extractor—rapidity of.......89
Honey for a cough.......41, 200, 776
Honey for hoarseness.......57
Honey for putting up fruit.......56, 152
Honey for rheumatism.......668
Honey for sick animals.......291
Honey for tired eyes.......67
Honey-house.......214
Honey in bread.......329, 442
Honey in cartons.......806
Honey in the United States.......116
Honey-knife—how to handle...666, 712, 739, 794, 809
Honeyless bees in the fall.......619
Honey-muffins.......73
Honey, not increase, wanted.......122
Honey-plants.......548, 566, 666, 739
Honey-prices.......524, 692, 708
Honey sensitive to odors.......761
Honey-shows.......442
Honey superior to sugar as a food.......787
Honey-tree story.......804
Honey-vinegar.......566, 821
Honey-wagon wanted.......541, 650
Horizontal bar in brood-frames.......708
Horses and bees.......668
Hot knife in extracting.......747
House-apiary.......27, 778
How bees feed each other.......278
How far bees go for honey.......270
Husking bees.......57
Hybrids of plants or animals.......681
Hybrids or Italians.......422, 794

Ignorance about bees and honey.......259, 691
Illinois foul-brood law.......163, 264, 308, 324, 388
Imports of honey and beeswax.......243, 345
Improving bee-pasture.......406
Improving of bees.......55, 211, 489, 787
Income per colony.......58
Indigo for stings.......75
Increase and not honey.......106
Increase of colonies..42, 74, 89, 122, 153, 169, 185, 201, 250, 280, 281, 346, 371, 489, 552, 569, 580, 600, 698, 714, 727, 778, 791.......824
Information about bee-culture.......184, 280
Injured queens—breeding from.......410
Inner life of the hive.......454
Insects and plant diseases.......83
Insects ruining honey crop.......643
Inspector (McEvoy's) of apiaries report.......70
Insurance of bees.......772
International exposition of bee-culture.......35
"In this locality".......771
Introducing-cages.......553
Introducing queens....73, 77, 85, 94, 195, 201, 323, 339, 363, 483, 521, 538, 542, 557, 602, 621, 635, 652, 665, 666, 682, 746, 750, 787, 827.......830
Investigations—apiarian.......566
Ironing uneven combs.......552
Iron in honey.......414, 537
Italian bees.......109, 218, 807, 815
Italianizing.......139, 538, 698, 729
Italians vs. blacks.......427

Jack-knife a good apiary tool.......650
Jenrs' (R. H.) apiary.......532
Joining the great majority.......57

Keeping bees in a house-room.......249
Keeping bees—how, why and what for?.......425
Keeping bees in city.......202 437
Keeping bees on shares.......89
Keeping bees with a baby.......455
Keeping comb foundation.......586
Keeping comb honey in winter.......747
Keeping down increase.......250
Keeping empty combs.......515, 794
Keeping honey.......634
Keeping queens.......90, 168, 297
Keeping swarming colonies strong.......473
Keeping wax-worms out of honey.......553
Keep your colonies strong.......819
Kilgore's (A. J.) apiary.......308
Killing bees—how to avoid.......547
Killing grass with blue vitriol.......649
Kingbirds and bees.......35, 395

Lady Warwick College.......840
Langstroth and bee-stings.......696
Langstroth a Presbyterian.......52
Large yields.......43
Late drones.......763
Late flights for cellar-wintered bees.......755
Late introduction.......538
Late-reared queens.......747
Late strawberries.......42
Laws on bee-diseases.......118, 134
"Laying habit" of queens.......57
Laying in queen-cells.......811
Laying of queens.......246
Laying workers.......163, 195, 297, 340, 377, 423
Lazy bees.......185, 521
Legislation in Illinois.......178
Lessons in bee-keeping by mail.......617
Let your light shine.......723
Leveling hives.......347
Life of bees.......820
Life's little things.......200
Light in supers.......281
Light in the bee-cellar.......42
Light-weight cases and sections.......265
Linden yield per colony.......74
Liquefying honey.......3
Literature of bee-keeping.......708
Little queens.......44
Lizards and insects that fool bees.......741
Locality and size of hives.......122
Location in bees—sense of.......787
Location for bees.......106, 154, 579, 643
Longevity of bees.......233
Long-lived bees and queens.......182, 277, 343
Loss of queens.......526
Lovers of honey-comb.......200
Lumber for hives and other supplies.......327

Mailing queens.......419, 682
Making dark honey light.......771
Making hives.......106, 202
Malt extract as a source of sugar.......153
Management of bees.57, 69, 111, 122, 138, 284, 315, 729
Marble-cake honey.......410
Marketing honey.....3, 5, 30, 36, 38, 118, 282, 595, 629, 718, 723, 739.......796
Market reports.......38
Mating of queens.......234, 425, 566
Melting honey out of wax.......200
Mice—bees embalming.......643
Mice in bee-cellars.......26, 73
Miceless honey-room.......313
Migratory bee-keeping.......724
"Missing link" in queen-rearing.......56, 105, 284
Mixing various nectars.......504
Mix-up of swarms.......264, 442
Moisture in bee-cellars.......87
Moldy combs.......153
Monkey-wrench story.......677
Moral principles that endure.......729
Motherwort.......444
Moths and moth-balls in hives..483, 521, 602, 613, 797
Moving bees.....9, 10, 87, 90, 99, 115, 116, 139, 186, 216, 232, 234, 254, 371 394, 437, 443, 456, 488, 539, 618, 634, 665, 698.......831
Mulberries for bees.......491
Mustard.......734

Name and address.......52
National Association...20, 38, 51, 84, 99, 100, 405, 468, 595, 659, 755, 787.......805
National Association and marketing honey.......3
National honey-exchange.......19, 22, 102, 118, 182
New and old things in beedom.......78
New bee-diseases.......323
New queens - crediting fairly.......3
Newspaper bee-lore.......775
Non-hatching eggs.......355
Non-swarming bees.......445, 456, 666, 761, 810
Non-swarming chamber.......403
Nuclei—formation.......165, 265, 385, 451, 474
Nuclei shipping.......250
Nuclei vs. full colonies.......55
Nucleus method of increase.......201
Nucleus queens.......440
Numbering queens.......249
Number of bees in a colony.......394
Number of bees used up in a pound of honey.......681
Number of brood-frames for comb honey.......804
Number of colonies for one man.......421, 553
Number of supers per colony.......779
Nurse-bees—influence of.......55, 330

Observation hives.......26, 73, 168
Odd fixtures in the apiary.......456
Odor around hives.......698
Oil of eucalyptus for foul brood.......696, 776, 836
Old brood-combs.......25
Old combs and queen-rearing.......42, 330, 339
Old locations vs. new.......73
Old soldier's apiary.......338
Old vs. new hives.......355
Olives.......252
Ontario Bee-Keepers' Association.......4
Ontario Honey Exchange.......87
Open-air colony.......105
Orange-bloom honey.......364
Ordering queens.......122
Ordering supplies in time.......515
Organization of bee-keepers.......30, 119, 373, 375
Organizing local bee-keepers' associations.......819
Origin of microbes.......781
Osmosis and atavism.......45, 137, 293, 393
Out-apiaries....69, 263, 275, 678, 681, 697, 715, 803, 825
Overdoneness of bee-keeping.......805
Overstocking a location.......247, 346, 552, 805

Packages for bulk honey.......558
Packing bees for winter.......634
Painting hives.......86, 218, 233, 266, 331, 634
Paper bags for honey.......211, 296
Paper for wintering.......291
Paraffin and wax.......557
Paraffin-coated material—bees gnawing through 26
Paraffin for shipping-cases.......59
Parthenogenesis.......420
Partridge-pea.......638
Paste for labels.......213
Pear-blight and bees.......23, 77, 89, 135, 243, 431
"Pelloncillas".......549
Pencilaria a new feed.......111
Phacelia.......10, 291, 307, 484, 675
Pickled brood.......228, 276, 330, 758
Piling up hives of bees for winter.......10
Pine for hives.......810
Piping of queens.......569
Placing hives.......195, 456
Planting for bee-pasture.......357
Plucky Cuban bee-keeper.......13
Pollen—bees carrying.......83, 196, 202, 218
Pollen in combs.......54, 74
Pollen in sections and combs.......169, 501
Pollen supply.......200
Pollination and bees.......229, 360
Poor honey crops.......214
Poor man and capitalist.......105
Porous covering for hives.......137
Portico hives and with sliding screens.......121
Poultry and bees.......712
Pounds of honey to one of wax.......218
Preparing honey for shipping.......579
Present needs of bee-keepers.......118
Preventing bees from flying.......185
Prevention of granulation.......89, 443, 665, 778
Prevention of increase or swarming......15, 124, 153, 189, 245, 279, 314, 536, 557, 569, 580, 717.......727
Price of hives.......423
Prices and profits in bee-keeping.......739
Prime swarms.......58
Problems of bee-keeping.......35
Producer's name on honey......83, 151, 180, 220, 313, 447.......509
Progress in bee-keeping.......70
Prolific queens.......85
Propolis—cleaning of hands....211, 283, 377, 403, 406, 675, 728.......809
Propolisin.......90, 173
Propolis on fence separators.......90
Propolis on foundation.......618
Proportion of honey to wax.......3
Public schools and bee-lore.......649, 772
Pumpkin blossoms as nectar-yielders.......520
Purifying beeswax.......297
Purifying extracted honey.......716
Putting bees out of cellar early.......201
Putting on sections or supers..297, 355, 443, 499, 571, 573, 585, 634.......663
Putting up honey for retailing.......25

Queen and her treatment.......627
Queen—behavior at different ages.......467
Queen caged long.......403
Queen-cages smashed in the mails.......595
Queen-cells.......403, 425
Queen-cells—fastening on combs.......388
Queen-cells in February.......250
Queen-cells start in full colonies.......403
Queen-excluders.......69, 442, 473, 807
Queen-larvæ food.......9
Queen-larvæ—temperature of.......794
Queen laying in January.......104
Queen in supers.......456
Queenless bees carrying pollen.......115
Queenless colonies......55, 266, 331, 363, 394, 456, 474, 552, 569, 585.......651
Queen-nurseries.......531
Queen passing through zinc.......553
Queen questions.......585, 650
Queen-rearing....7, 24, 40, 42, 60, 99, 130, 136, 169, 173, 198, 204, 221, 230, 266, 279, 295, 310, 314, 365, 381, 440, 504, 525, 567, 664, 762.......803
Queen-right colonies.......282, 500, 585
Queens dead on alighting-board.......121
Queens getting through excluder.......43
Queens injured by sudden cessation of laying—are they?.......547
Queens laying in queen-cells.......768
Queens lost in hives.......378
Queens or laying workers.......740
Queens—replacing.......36
Queen's retinue.......429
Queen the soul of colony.......419
Quilts for bees.......340, 362, 715
Quoting the honey-market.......691

Races of bees.......837
Ranch bee-keeping sister.......424, 441
Rape.......234, 282, 445
Raspberries.......747
Read all the bee-papers.......194
Reading bee books and papers.......572
Reading in winter.......88
Rearing queens....7, 24, 56, 72, 92, 119, 121, 150, 186, 190, 233, 234, 250, 277, 330, 343, 346, 359, 375, 386, 407, 419, 443, 472, 475, 485, 488, 521, 538, 553, 569, 571, 601, 603, 663, 729.......750
Red bees.......323
Red clover bees.......443, 666, 779
Red clover leaves—working on.......491
Reducing number of colonies.......633
Reliquefying honey.......87, 105, 200
Reminiscences of bee-keepers and bee-keeping 693, 709.......725
Removing honey from brood.......552
Removing pollen from combs.......601
Removing supers of honey.......585, 651
Rendering combs into wax.......202, 810
Replacing queens.......36
Requeening colonies.......309, 698
Retailing basswood honey.......38
Returning swarms.......69, 584, 585, 586
Rheumatism from bee-stings.......394
Right to a locality.......806
Ripening honey.......122
Robber-bees and robbing.....38, 44, 156, 249, 302, 358, 378, 393, 500.......798
Robber-cloth.......483
Rosemary cure for foul brood.......682
Rubber stamp for bee-keepers.......215

Sainfoin.......309, 446
Salt and lime for bees.......755
Sampling incoming nectar.......227

Saving comb.... 427
Scientists needed by bee-keepers.... 163
Scourene.... 643
Screens for apiaries.... 611
Sealed covers in winter.... 325
Second-swarms.... 371
Section-cases under the hive.... 634
Section frame.... 420
Section-honey.... 413
Select colonies for breeding.... 611
Self-hiving of swarms.... 819
Self-spacing frames....435, 446, 679
Selling extracted honey.... 56
Separating swarms.... 362
Separators....766, 806
Shade for hives....9, 56, 76, 123, 234, 347, 362, 552, 762.... 778
Shaken or forced swarms... 9, 24, 43, 58, 99, 115, 130, 137, 139, 147, 152, 153, 183, 201, 205, 232, 251, 280, 309, 318, 323, 341, 357, 407, 426, 471, 548.... 550
Shaking queens off combs....585, 697
Shallow extracting-frames.... 682
Shipping bees.... 634
Shipping bees to Cuba.... 19
Shipping-cases.... 137
Shipping honey....67, 579, 586
Shipping queens.... 547
Shoestring as a honey-plant.... 123
Shower-grass.... 10
Sing a song (poem).... 116
Single-blessedness.... 526
Sisters across the sea.... 823
Size of bees.... 794
Smelter smoke and bees.... 105
Smoker-fuel....8, 59, 76, 86, 120, 298, 590, 666, 697.... 837
Smoking bees....73, 499, 729, 824, 837
Smoking hives at the entrance....707, 740
"Snipper" among bee-keepers.... 152
Snow and sunshine.... 147
Solar wax-extractor.... 505
Solitary bees.... 794
Sour honey....634, 783
Southern and Northern bee-keeping.... 19
Southern honey....51, 131
Sowing for bees....77, 366, 680
Spacing brood-frames....10, 106
Space over brood-frames.... 26
Space over sections....228, 330
Sparing the pests.... 121
Spider-plant.... 682
Spirit-level.... 195
Splints for foundation.... 810
Spotting clothes.... 231
Spraying fruit-trees and bees....124, 190, 196, 227, 249, 653.... 810
Spreading brood....396, 430
Spring demand for bees.... 569
Spring dwindling.... 283
Spring feeding...202, 218, 232, 254, 298, 326, 344, 360, 411, 442, 454, 455, 455, 518.... 616
Spring management of bees....53, 69, 149, 184, 264, 295.... 297
Spring packing of bees.... 53
Square or tall sections.... 164
Staples for fastening hive-bodies.... 819
Starters (foundation) or full sheets in sections 88, 217, 218, 538, 574, 584.... 819
Starting in bee-keeping....167, 682, 762
Starting queens in upper story.... 248
Statistics—gathering....99, 275 434
Steady subscriber.... 133
Sticking frames together.... 153
Stimulative feeding.... 139
Stinging a mark.... 313
Stinging bright objects.... 366
Stingless bees.... 116
Stores for winter.... 43
Storing in glass jars.... 632
Stove-blacking.... 137
Straining wax.... 339
Stray swarms.... 675
Strong colonies for wintering.... 397
Strong in bees but short in stores.... 619
Sugar-beet may supplant.... 627
Sugar candy for winter stores....775, 783
Sugar consumption in the U. S....13, 105
Sugar for bees.... 35
Suggestions to writers.... 136
Sulphuric acid for cleaning beeswax.... 683
Sumac.... 473
Sunflowers.... 280
Supers.... 122
Supers—where to add extra.... 419
Swarming...37, 55, 60, 69, 165, 168, 184, 232, 233, 245, 279, 281, 314, 315, 325, 331, 346, 362, 371, 377, 412, 415, 442, 470, 472, 521, 536, 551, 557, 558, 563, 580, 598, 602, 603, 633, 634, 635, 637, 655, 659, 665, 681, 729, 732, 810.... 823
Swarming out in winter.... 109
Swarm on tree several days....692, 714 746
Swarms deserting....26, 583
Swarms returning.... 538
Swarm—what is a.... 76
Swarms with clipped queens.... 115
Swarm with queen-cell.... 473
Sweet clover....43, 58, 71, 74, 106, 154, 186, 234, 251, 515, 698, 702, 713, 745, 810.... 814
Sweet clover honey....506, 538
Sweetening fruits with honey.... 248
"Sweeter than honey".... 333
Sweet tooth of Uncle Sam....654, 772
Swiss honey.... 836

Taking bees from cellar....169, 179, 218, 253, 285, 298, 340.... 422
Taking out bees and returning to cellar....99, 138
Taking off sections....499, 520, 659
Tall sections.... 698
Tarred paper for wintering.... 355
Tartaric acid and granulation of honey.... 174
Tartaric acid in syrup.... 138
Taxing bees.... 341
Temperature of brood-chamber.... 565
Tennessee honey-plants.... 219
Tents for bee-work....185, 341
Testing barrels.... 339
Testing honey.... 168
Testing seeds.... 485
Texas Experiment Station.... 131
Texas Honey-Producers' Association.... 745
Text-books on bee-culture.... 371
Thermometer for bee-cellars.... 73
Thought it was a bee.... 324
Three or five banded bees.... 682
Tiering up supers.... 814
Timber and bee-feed.... 757
Time to rear a queen.... 553
Tired eyelids—honey for.... 137
Tobacco-smoke.... 584
Tomatoes and honey.... 728
Too successful a sister.... 746
Top-bars—width of....26, 106, 824
Transferring bees....58, 90, 139, 154, 168, 185, 202, 218, 233, 234, 249, 326, 346, 363, 376, 409, 427, 474, 505, 552, 682, 747.... 749
Transferring larvæ.... 339
Tree-planting and reforesting....760, 810
Trouble over a bee-tree.... 330
Two-pound sections.... 473
Two queens in hive.... 803

"Umbilical cord" and queens....26, 263, 479
Unfinished sections... 41, 117, 120, 130, 172, 185, 199, 232, 234, 236, 250, 262, 269, 312, 327, 345, 362, 380, 541.... 795
Uniting bees....53, 217, 260, 296, 297, 314, 361, 429, 439, 552, 585, 602, 682, 715, 763, 765.... 809
Unprofitable colonies.... 728
Unripe extracted honey.... 501
Unscrewing honey-can tops.... 357
Untested and tested queens....73, 538
Uses of honey.... 573

Value of breeding or other stock.... 312
Value of foods.... 67
Value of purchased queen.... 435
Ventilating hives....488, 537, 707, 810
Vetch for bees.... 586
Vicious bees....3, 339
Virgin queens....168, 169, 195, 323, 467, 652, 835
Virgin's (C. W.) apiary.... 162
Visiting bee-keepers.... 620

Water for bees....167, 280, 377, 441
Water in honey....86, 200, 318, 682, 803
Watering-places....231, 342
Watery sections of honey....339, 455
Wax-cakes.... 381
Wax-extractors and wax-rendering....200, 249, 398
Wax-moths.... 724
Wax-presses.... 85
Wax-production.... 243
Weak Colonies....168, 330, 439, 585, 746
Weeds of Ontario.... 755
Weight of extracted honey.... 627
Wells (G. H.) apiary.... 162
Wetting sections for folding.... 57
What and how to read.... 121
Whitening the skin—lotion for....247, 313, 807
White pine for hives.... 763
White's (Frank) address.... 181
White's Class Advtg. Co.... 306
Why I am a bee-keeper.... 53
Wild bees....197, 394
Wild cucumber.... 28
Wintering bees....26, 28, 38, 43, 99, 217, 219, 271, 281, 357, 381, 405, 408, 421, 566, 618, 619, 634, 650, 665, 666, 682, 714, 715, 718.... 778
Winter stores—consumption of....248, 666, 702, 715.... 775
Winter temperature of bees.... 38
Wired combs for starters.... 795
Wire in comb honey.... 331
Wiring foundation....54, 266
Wiring frames....202, 218, 643
Women carpenters to the front.... 199
Wonderful honey-district.... 354
Worker-bees.... 184
Worker-comb building.... 442
Working bees with few visits.... 243
Working on different flowers.... 807
Worth of queen as a starter.... 396
Writing up honey.... 386

Yellow Jessamine.... 435
Youngman's (F. L.) apiary.... 612
Young queen-breeder.... 27
Young queens swarming....403, 451

ILLUSTRATIONS.

Alfalfa plants.... 212
Alley, Henry.... 243
Apiary and family of Louis Meyer, Sr.... 705
Apiary among spring flowers.... 785
Apiary and home of E. H. Beardsley.... 17
Apiary and home of J. P. Ivy.... 130
Apiary in mesquite grove.... 785
Apiary of J. S. Barb.... 81
Apiary of George Brown.... 33
Apiary of A. B. Carpenter.... 258
Apiary of C. C. Chamberlin.... 337
Apiary of S. T. Crim.... 705
Apiary of W. C. Evans.... 257
Apiary of C. A. Fairbanks.... 705
Apiary of V. H. Fisher.... 66
Apiary of Peter Fleming.... 705
Apiary of Peter Gallee.... 161
Apiary of A. J. Kilgore.... 305
Apiary of Wm. W. Green.... 161
Apiary of F. W. Hall.... 1
Apiary of R. H. Jeurs.... 529
Apiary of A. H. Klick.... 417
Apiary of C. Lindblom.... 98
Apiary of S. A. Matson.... 705
Apiary of W. J. McCarroll.... 726
Apiary of L. C. Medkiff.... 241
Apiary of M. H. Mendleson.... 754
Apiary of E. A. Miller.... 257
Apiary of M. Sparks.... 419
Apiary of N. Staininger.... 114
Apiary of A. W. Swan.... 705
Apiary of C. W. Virgin.... 161
Apiary of J. A. Watkins.... 49
Apiary or G. H. Wells.... 161
Apiary of John Witt.... 545
Apiary of F. L. Youngman.... 609
Armstrong, James.... 193
Atkins (Frank W.) and bat swarm.... 337
Austin, Hon. H. W.... 372

Barber, Mrs. A. J.... 321
Bingham honey-knife.... 712
Bingham, T. F.... 712
Blanchard's Music Hall.... 465
Brodbeck, Geo. W.... 593
Burro and rider.... 1

California home.... 676
California view.... 689
Car-load of bee-keepers.... 673
Carver (Tom) and apiary.... 337
Central City, Colo.... 1
Chanting before Kisi.... 385
Chrysler, W. A.... 193
Cook, Prof. A. J.... 597
Corn-carrier.... 385
Couse, Wm.... 225
Cowan, Thos. Wm.... 513

Dadant, C. P.... 577
Darling, J. K.... 225
Dittmer, Gus.... 817

Emigh, Martin.... 225
Evans, J. D.... 257
Extracting sections—plan for.... 516

Fence-rail colony.... 21
France, N. E....209, 742
Fumigating diseased combs.... 742

Gemmill, F. A.... 257
Georgetown, Colo.... 1
Glass-bottom boat (Julian's).... 644
Grand Canyon Hotel.... 497
Grand Canyon of the Colorado River.289, 833

Hall (Luella) and swarm.... 1
Harbison, J. S.... 709
Harris, Jas. U.... 561
Hive-entrance reducer.... 260
Hiving a swarm.... 49
Holmes, M. B.... 193
Home of F. W. Hall.... 1
Hyde, Mrs. and H. H.... 785
Lewis, G. B.... 657
Los Angeles convention group.... 801
Martin, John H.... 146
McEvoy, Wm.... 225
McIntyre, J. F.... 647
Miller, F. J.... 257
Moki family.... 385
Movable extracting-house.... 130
Muth, Fred W.... 769

Newman, Thos. G.... 177
Newton, John.... 225

Out-apiary of Geo. W. Brodbeck.... 721

Parade wagon of F. W. Hall.... 1
Pettit, Morley.... 353
Post, C. W.... 225
Pouder, Walter S.... 737
Pryal, W. A.... 757

Queen-cells.... 199

Root, A. I.... 693

Scene on Georgetown and Silver Plum trip.... 1
Sibbald, H. G.... 193
Smith, J. Q.... 481
Snakes in Kiva.... 385
Sparling, J. W.... 193
Stanley Queen Incubator and Brooder.... 82
Sweet clover.... 713

Tank (Huff's) for fumigating combs.... 743
Toepperwein, Udo.... 625
Touchton, Rufus.... 401

"Umbrella Rock" in Garden of Gods.... 1

Ward (C. J.) and apiary.... 369
Weissenfels (J. A.) and apiary.... 433
Winter (Rev. H. A.) and home.... 337
Wood, S.... 641
Working with Holy Land bees.... 785

CORRESPONDENTS.

Abel, E. W. 105
Abel, Hope H. 746, 788
Abbott, Emerson T. 438
Achard, Chas. B. 507
Adams, George W. 45
Aden, J. R. 509
Aikin, R. C. 118, 166
Alden, A. J. 499
Aldrich, B. A. 252
Alexander, C. 813
Alley, Henry, 24, 198, 343, 375, 407, 440
Allinger, G. C. 27
Alpaugh, J. 36
Amos, Mrs. A. L. 714, 793
Anderson, A. G. 479
Anderson, A. S. 427
Anderson, Ella, 649
Andes, M. D. 439
Andrews, D. E. 590
Andrews, Marion F. 780
Ansell, Walter H. 486
Archer, Dr. J. 683
Archibald, E. 349, 557
Ascha, C. G. 395
Atkerson, A. W. 173
Atkins, Frank W. 338
Atwater, E. F. 116, 550
Austin, Kate V. 42, 265, 444, 633
Avera, Mary E. 425
Aurich, C. E. 749
Ausmus, J. B. 831

Bachtel, I. C. 130
Bacon, D. C. 395
Ba[illegible]er, J. L. 590
Baker, C. W. 811
Baker, John M. 236
Bailey, Elisha, 109, 491
Bailey, W. M. 750
Baldwin, A. Y. 130, 269
Banker, Fred, 254
Barber, C. J. 78, 825
Barber, Ira, 302
Barb, J. S. 84, 253
Barclay, Richard D. 2d, 621
Barrette, Mrs. Paul, 487
Barrus, B. F. 718
Bartz, A. C. F. 299, 360, 411, 412, 542, 600, 663
Beardsley, E. H. 21
Beaudin, A. L. 13
Bechly, Fred, 28
Beck, Baptist, 739
Bee, Auntie, 329
Beer, H. 270, 301
Beiler, A. S. 606
Bell, G. W. 460, 733
Bennett, B. S. K. 30, 94
Benson, C. H. 444
Bergdoll, Louis J. 568
Best, Henry, 269
Beverlin, W. S. 526, 686
Bevins, Edwin, 173, 237, 335
Bingham, T. F. 428, 712, 809
Blackwood, 671
Blake, Jos. 361
Blair, L. G. 156, 253, 445, 683
Blanton, Dr. O. M. 44, 559
Blocher, D. J. 268
Blocher, John A. 60
Blunk, J. P. 338, 830
Bohrer, Dr. G. 391, 428, 696
Boomer, A. 15, 331
Botsford, W. W. 700
Bowen, Mrs. Artie, 649, 775
Boyd, U. S. 347, 412, 780
Bradford, Mrs. E. G. 520
Bradford, Jr., E. G. 133
Bradish, C. W. 46
Bragg, W. F. 307
Brewer, M. L. 463
Briggs, F. B. 765
Brodbeck, Geo. W. 52, 132, 204, 484
Broderick, Thos. 204
Brown, Chas. D. 253
Brown, James, 190
Brown, Mrs. D. W. 472, 840
Brown, W. J. 53
Bryant, Luther, 718
Buchheim, F. S. 75
Bull, John C. 606
Burdette, Ethel M. 376
Burgett, Nina, 649
Burnett, R. A. 501
Burr, Leslie, 446
Burrow, Mrs. Ben D. 580
Butler, J. M. 475
Byer, B. L. 93, 318, 462
Byer, J. L. 39

Callbreath, John S. 219
Cameron, Mrs. Peter, 537
Caneday, Victor V. 712
Carpenter, A. B. 256, 807
Carr, J. E. 350
Carroll, H. S. 204
Cary, Robt. J, 59, 124, 414
Cary, W. F. 298, 332
Castle, F. E. 238
Chamberlin, C. C. 338
Chambers, J. E. 63, 104, 143, 599
Chantry, Thos. 812
Chase, H. H. 798
Christensen, Hans, 606, 686
Christie, J. M. 523
Chrysler, W. A. 88
Cilley, Chas. W. 294
Clark, J. I. 590
Cleary, Wm. 381, 699
Clemons, Chas. F. 827
Cleveland, Ralph D. 365
Cline, John, 61, 590
Clymer, H. C. 380
Coates, John, 524
Coe, E. W. 116
Coggshall, W. L. 708
Common-sense Bee-Keeping, 745
Conkle, S. Q. 155, 606
Congdon, H. W. 174
Cook, Prof. A. J. 22, 102, 229, 293, 356, 422, 436, 517, 597, 631, 760
Cooper, Mrs. A. B. 603
Corey, John G. 236, 725
Cornelison, H. W. 250
Coverdale, Frank, 203, 327
Cowan, Thos. Wm. 519
Coyle, W. R, M, 749
Craig, Harry S, 253
Craig, J. M. 317,
Crane, J. A. 371, 382
Crane, J. E. 61, 310, 415, 429
Cram, M. F. 309
Creaser, Wm. R. 254
Creelman, G. C. 574
Creighton, J. G. 750
Crim, S. T. 706
Crone, Geo. S. 683
Cruickshank, Mrs. C. G. 248
Cruickshank, J. M. 124
Culbertson, Griffin, 94

Dadant, C. P. 7, 71, 149, 231, 246, 263, 326, 344, 391, 423, 471, 518, 663, 696, 776, 807, 821, 836
Dalrymple, A. 445
Darby, A. W. 718
Darling, J. K. 69
Darling, W. J. 654
Darnell, W. O. 349
Darrow, Chas. M. 12
Davenport, C. 374, 453, 501
Davenport, F J. R 59
Davidson, Dr. E. M. 77
Davis, J. H. 461
Davis, Mortimer, 109
Davis, P. H. 111, 426
Davis, W. J. 1st. 237
Degroff, Frank S. 77
Degroff, John, 557
Deitz, A. M. 254
Dingman, G. L. 822
Dittmer, Gus, 325
Dockham, A. T. 591
Doolittle, G. M. 39, 165, 262, 278, 295, 310, 333, 398, 419, 470, 479, 495, 815
Dopple, Chas. J. 12
Drake, F. H. 254, 324
Drinnin, S. P. 526
Duclos, Chas. 827
Dudley, G. E. 182
Durham, D. L. 463
Durr, G. C. 379
Dusty, M. 472
Dye, R. R. 396

Eastman, Edgar, 813
Eastwood, Dr. W. O. 60, 67
Eddy, Mrs. Geo. S. 247
Edwards, Evan E. 222
Edwards O D. 591
Ellis, E. B. 766
Elmore, L. W. 301
Erdman, John, 108
Erickson, A. G 686
Evans, Clara West, 568
Evans, J. D. 37
Evers, D. E. 219, 395
Everson, E. N. 315

Fairbanks, C. A. 11
Ferguson, Mrs. Ben, 172, 455, 5 4
Fisher, V. H. 68
Fisher, W. 379
Fixter, John, 54
Flanagan, E. T. 491
Fleming, Peter, 706
Flick, H. H. 749
Foote, A. F. 46, 733, 767
Fox, Elias, 652
France, N. E. 20, 152, 232, 388, 742
Frank, 638
Freeman, A. J. 748

Gallup, Dr. E. 40, 56, 72, 119, 182, 187, 246, 260, 277
Gallup, Herbert S. 259
Garrison, Mrs. J. J. 393
Gathright, W. C. 797
Gehring, J. D. 183, 359
Gent, F. 76
George, Mrs. Olive, 247
Getaz, Adrian, 55, 61, 407, 550, 557, 727
Gilbert, L. M. 260
Gilliland, Wm. J. 220, 638
Gill, M. A. 260, 271, 342, 574, 718
Gilman, Mrs. J. H. 775
Gilstrap, W. A. H. 318
Godfrey, James, 29
Golden, J. A. 653
Gore, Thos. 300
Goss, R. V. 524
Goucher, Warren, 477
Graening, Dr. C. H. 699
Graham, Fred E. 591
Green, J. A. 197, 439
Green, Wm. W. 162
Greiner, F. 15, 214, 327, 491, 566
Greiner, G. C. 31
Greves, Harry, 204
Griffith, Sarah J. 121, 216, 280, 441, 551, 680, 840
Grover, James, 683
Gunzel, F. J. 159

Hachenberg, G. P. 308
Hagood, J. M. 348
Hairston, J. T. 55, 130, 207
Hall, F. W. 4, 351, 525
Hall, Mrs. Mary B. 757, 762
Hall, Mary J. 410
Hall, Luella R. 9
Hall, T. S. 299, 347
Halley, Mrs. Rebecca, 377
Hambaugh, Hon. J. M. 328, 375
Hammond, L. A. 11, 155, 253, 348
Hanegan, Leo F. 420
Hand, J. E. 180
Hanna, W. A. 283, 427
Hansen, V. A. 173, 734
Harbeck, P. H. 28, 109, 380
Harbison, J. S. 709
Harlan, C. H. 286
Harrah, D. A. 446
Harris, C. S. 92, 435
Harris, W. D. 28, 447
Harrison, Mrs. L. 12, 251, 283, 459, 603, 714
Hartman, Sanford, 286
Hartwig, Wm. 748
Harvey, M. W. 475
Hasty, E. E. 347
Hatch, Mrs. H. 551
Hatch, O. L. 606
Hawk, G. D. 12
Hawkeye, 205
Hayck, B. W. 444
Hazleton, Alice, 681
Heath, Samuel, 189
Heberly, J. A. 104
Heffner, Floyd. M. 638
Heim, Wm. H. 252
Henry, Mrs. C. 680
Henry, Inez J. 583
Herlong, D. H. 333
Hershiser, O. L. 419
Hey, W. H. 411
Higgins, H. A. 707
Highbarger, L. 379
Hilbert, James, 654
Bill, H. E. 531
Hill, R. F. 279
Hinckley, Geo. E. 835
Hobbs, J. M. 158, 543
Hogarty, W. P. 667
Hoffman, Mrs. E. K. 167
Holekamp, Robt. A. 380
Holtermann, R. F. 283, 300, 357, 383
Hooker, A. E. 582
Hoover, A. M. 460
Hornback, Jas. 446
House, Alice M. 728
House, Howard H. 718
Houser, Mrs. Mary E. 345
Howe, Geo. B. 575
Huffman, E. B. 77
Hunsberger, Guy, 284
Hunt, F. H. 589
Hunt, Geoffrey, A. 381
Hunter, J. N. 284
Hunter, Rachel, 714
Huntington, Mrs. R. A. 488, 680
Hurley, Theo. S. 254, 446
Hurt, W. D. 269
Hutchinson, W. Z. 373, 493
Hyde, H. H. 319, 396, 558, 599, 789, 791
Hyde, O. P. 615

Irish, James H. 357
Irvine, W. 223
Iselin, Sebastian, 413

Jachinstal, Fred, 175
Jacot, A. C. 782
Jefferson, W. D. 668
Jeffrey, H. L. 312
Jeurs, R. H. 532
Job, C. 124
Jones, H. L. 447, 451
Jones, Letitia, 184
Jones, P. D. 83
Johnson, J. E. 23, 135, 215, 600, 648, 685, 700, 702, 716, 776, 813
Johnson, J. W. 590, 766
Johnston, A. E. 379

Kamerer, J. R. 92
Kane, James, 95
Kauffman, E. B. 477
Keller, Jos. 270
Kellogg, Frank E. 540
Kelly, Geo. R. 831
Kennedy, John, 623, 837
Kennedy, Miss L C. 409
Kemp, Chas. E. 302, 462
Kerr, F. M. 75
Kerr, Geo. 798
Ketcham, D. M. 263
Kilgore, A. J. 308, 381
King, Mrs. Lou O. 536
Kingsley, F. 269
Klick, A. H. 420
Kluck, N. A, 411, 485, 508
Knapp, Frank E. 203, 748
Knauth, F. R. 605
Knoll, Edward, 11, 205
Knowles, Mrs. G. W. 441
Koentz, C. H. 734
Kolls, Gustavus, 315
Kompophakelleremon, 142
Lathrop, H. 459, 474
Laudenslayer, Dean, 158, 621
Lawrence, C. M. 298
Laws, Mrs. W. H. 216
Lemaster, P. T. 45
Leonard, L. D, 844
Leudloff, Herman, 270
Leupold, Gustav, 110
Lincoln, C. M. 286, 396, 605
Linscott, J. M. 459
Livingston, Mrs. B. J. 618
Lockett, James, 716
Lovesy, E. S. 5
Lyon, Emma A. 455
Lytle, T. 6

MacFarlane, Etta, 697
Mack, Mrs. L. 441
Mahin, Rev. M. 750
Marks, W. F. 151
Martin, J. H. 13
Martin, W J. 506, 590
Martin, Wm. R. 667, 780
Matson, S. A. 706
Mayer, Georgia, 441
McBride, A. J. 302
McBride, F. 284, 379, 556
McCain, Rev. R. B. 394, 604, 804
McClelland, A. 334
McColley, R. L.
McClanathan, A. 556
McDowell, P. 108
McEvoy, Wm. 70, 75, 147, 197, 264, 517
McIntyre, J. F 6, 646
McKinnon, C. P. 526
McLean, D. A. 478
McLeod, D. C. 381, 590
McNay, F. 384, 708
McNeal, W. W. 447, 791, 844
Mead, W. E. 638
Mears, Mrs. C. D. 455, 473, 665
Medkiff, L. C. 242
Michael, J. F. 174
Miles, E. S. 315
Miller, Arthur C. 136, 163, 230, 260, 275, 278, 290, 312, 355, 381, 408, 454, 466, 484, 535, 572, 615, 627
Miller, Dr. C. C. 52, 76 179, 246, 308, 355, 469, 471, 478, 484, 531, 677, 792
Miller, S. E. 180, 395, 430, 573, 819
Miller, Wm. 46
Mitchell, W. S. 78
Moe, Glen E 685
Moloney, George J. 523
Moore, Herman F. 84, 163, 264, 324, 405, 486
Moore, J. P. 547
Moore, W. A. 797
Moore, W. H. 637
Morgan, E. A. 85
Morgan, Lillian M. 617
Morrett, S. 76
Morrell, F. L. 798
Morris, C. E. 367
Mosher, Mrs. L. A. 568
Mottaz, A. 283
Mourn, G. W. 813
Munson, Nettie A. 455
Mutschler, Belle, 820

Nebraska Subscriber, 798
Neillie, Chas. R. 462
Nelson, Andrew, 426
Nevada Apiarist, 604
Newell, Wilmon, 142, 556
Newman, A. H. 179, 194
North, Lyman, 844
Nussle, E. E. 437

Ohmert, Geo A. 123, 781
Olson, Alma, 221

Pagan, E. V. 808
Parker, D. G. 542
Parsons, C. C. 131
Patton, J. S. 287, 388, 700, 731
Payne, S. M. 424
Peet, Minnie, 472, 632
Peiro, Dr. F. L. 492, 637
Pennoyer, L. A. 285
Perry, L. H. 382
Pettit, Morley, 643, 717
Pettit, S. T. 236, 254, 299
Phillips, Geo. 652
Palmer, S. A. 45
Poppleton, O. O. 532, 535, 708
Porter, H. H. 813
Porto Rico, 133
Pouder, Walter S. 745
Presswood, Luther, 348
Price, D. J. 335
Pryal, W. A. 757, 772

Quirin, H. G. 268, 844

Ramer, P. B. 127, 445
Rasmussen, Frank, 21
Reed, J. A. 615
Reed, Oren S. 269
Rehorst, Theodore, 76
Reiber, Wm. 254
Reno, J. T. 783
Rex, Geo. T 332
Reynolds, Manfred, 237
Rice, O. K. 174
Richter, A. 595
Rick, Dr. J. B. 685
Ricketts, L. V. 111
Robinson, J. W. 60
Rockenbach, Geo. 558
Root, A. I. 116, 396, 428, 693, 814
Root, H. H. 85
Root, W. H. 749
Rosseau, L. C. 173
Rosson, Lon, 123, 239, 269
Ruggles, Wm. 412
Russell, C. R. 191, 254
Russell, Wm. 733
Rystrum, J. G. 204

Sager, Grace W. 392
Sanderson, Prof. E. D. 535, 692
Sanford, James, 123
Sanford, Riley, 173
Sawyer, Dr. W. G. 414
Schmidt, B. F. 109, 316, 781
Scholl, Louis H. 565
Schoppenhorst, H. A. 525
Schweinhagen, H. D. 360
Secor, Eugene, 51, 101
Seitz, Wm. 268
Semmens, John S. 162
Shaffer, W. G. M. 44
Shepard, A. D. 127
Sherfey, H. M. 46, 219
Sherman, S. L. 203
Shirk, B. P. 555
Shockey, Ira, 750
Shupe, Anna, 583
Shutt, Prof. Frank T. 318
Simmins, Samuel, 67, 147
Simmons, Luke, 606
Simon, M. N. 110
Sittler, C. J. 27
Slack, Geo. B. 126
Smith, A. W. 40, 461, 825
Smith, Elizabeth M. 520
Smith, E. I. 637
Smith, Jas. R. 460
Smith, S. B. 316, 700
Smyth, Dr. A. W. 398, 836
Snell, F. A. 220, 333
Sossaman, M. H. 76, 203
Spitler, George, 12
Stachelhausen, L. 70, 150, 245, 359, 581
Staininger, N. 270
Stanley, Arthur, 59
Stanley & Son, Thos. C. 723
Stauffer S. H. 93
Steger, Theo. 206
Stewart, John C. 268
Stimson, C. 222
Stinebring, Geo. W. 183, 749
Stokesberry, R. R. 445
Stolley, Wm. 206
Stone, Henry A. 732
Stone, Homer C. 207
Stone, Jas. A. 404
Stone, Mrs. Delia, 603
Stoneman, Geo. W. 227
Stow, S. M. 583
String, J. L. 187, 796
Stumpe, H. B. 159
Swan, A. W. 706

Tabor, Mrs. A. W. 361
Tarbox, Mrs. R. 376
Taylor, R. L. 502, 590, 835
Theilmann, C 349
Thilke, Louisa, 424
Thompson, F. L. 814
Thompson, R. 11
Townsend, E. D. 243
Travis, Alma, 504
Travis, I. A. 780
Travis, L. L. 60
Trimberger, John, 516
Trowbridge, S. 524
Tuchschmid, U. 836
Tucker, E. 506
Tull, John P. 27
Tyler, Fred, 348, 508

Urich, Wm. 174

Vail, V. 254
Van Blaricum, Carson, 459
Vangundy, G. W. 27, 108, 269, 556
Van Meter, W. S. 730
Vieta, Col. G. G. 13
Virginia Bee-Keeper, 751, 838
Virgin, C. W. 162
Vogt, N. H. 637
Voight, C. H. 174
Voorhees, Frank, 110

Wagner, A. F. 749
Wagner, Lucy M. 137
Wagner, Norton, 174
Waite, M. B. 243
Wainright, Catherine, 807
Ward, Edwin, 590
Weber, C. H. W. 180, 227
Weber, S. J. 541
Webster, E. S. 734
Welch, D. H. 452
Wells, G. H. 162, 254, 606, 844
West, Mrs. C. R. 296, 350
West, J. M. 541
Wheeler, Frances E. 697
Whitcomb, Geo. B. 140, 188, 366, 477
White, J G. 364
White, Martha, 424, 807
White, N. R. 444
Whitford, G. M. 380
Whitney, Wm. M. 79, 387, 412, 655, 821
Whipple, W. W. 413
Wiggins, F. C. 299
Wiley, S. E. 410
Wilkerson, S. M. 299
Williamson, G. B. 123, 157
Wilson, E. E. 654
Wilson, G. W. 380
Wing, Jas. H 238
Winter, Rev. H. A. 108
Wiseman, Dr. W. A. 303
Wittner, C. H. 541
Womack, C. A. 426
Wood, Delos, 444, 766
"Wrexham," 255

Yahnke, Frank, 822
Yonson, Yon, 92, 108, 477
York, Anderson, 463
York, George W. 7, 118
York County Bee-Keeper, 670, 783, 803
Young, A. G. 526
Young, J. M. 29, 86, 215
Young, W. R. 427

Zahner, M. 77
Zeigler, A. 190
Zoll, C. 316

FROM MANY FIELDS

First Snap of Winter.

We are just having our first snap of winter here, the temperature playing around zero the past few days. Bees have gone into winter quarters in fine shape.

H. G. Quirin.

Huron Co., Ohio, Dec. 17.

A Correction.

Friend York:—In the 2d paragraph of my article, on page 791, an error appears. Please correct as follows: This being the case, then practically the progeny of the young queens was not old enough to gather honey prior to the date of Aug. 8. As it stands there, the type makes me say that none of the young queens were old enough, etc.

Scioto Co., Ohio. W. W. McNeal.

Wintering in an Out-Building.

I had 14 colonies to begin the season of 1903 with, and now have 40, all in good condition, besides getting 600 or 700 pounds of comb honey. I have stored the bees in an out-building, stacked in four hives wide and three high, in a room 6x12, and about 5 or 6 feet high. They have plenty of air, but nearly dark. I weighed them, and they averaged 50 pounds, none less than 44 pounds. The 8-frame hives weigh 20 pounds, leaving 24 pounds for the bees and honey. I weighed a good many of them Nov. 1, and then again Dec. 8, and found that they had consumed and lost from 4 to 5½ pounds per colony, the heaviest loss seeming to be in those that had weighed the heaviest, some as much as 63 pounds. I raised the covers and put a double thickness of muslin over the frames, and then put on the cover again.

GEORGE H. WELLS.
Johnson Co., Mo., Dec. 12.

Did Better Than the Average.

I have been a subscriber to the American Bee Journal only one year, but I have never wanted my money refunded, as I consider that I have learned more than a dollar's worth from its pages. But being "only a renter," my bees seem to have hardly a fair chance, as I have to move them around so much. I commenced three years ago with 5 colonies, and did not know the difference between a queen-bee and a horse-fly, but I think with the aid of the "Old Reliable," etc., I will be able to produce enough honey for home use.

Last spring I had 10 colonies, increased to 16, and took off about 600 pounds of comb honey, mostly white clover. I had some customers who said that my honey was the best they ever ate. I have the long-tongue Italians, and I know that they stored a better average than any bees in my locality this year, and I compared with some "old hands at the business," too.

LYMAN NORTH.
Page Co., Iowa, Dec. 11.

Report of the Minnesota State Convention.

The Minnesota State Bee-Keepers' Association met Dec. 2 and 3 at Minneapolis.

The meeting was interesting and successful from a social point of view, and instructive scientifically. Papers were read by Pres. Wm. Russell, Mrs. H. G. Acklin, Prof. F. L. Washburn, State Entomologist; Walter Ansell, S. Lindersmith, N. P. Aspinwall, Mrs. W. S. Wingate, G. R. Frye, Dr. E. K. Jaques, Wm. Cairncross, and George A. Ferguson.

The work of the Association, through special committees for the year, has been in the direction of displacing adulterated honey from the market, and a constant pressure is made on the State Dairy and Food Commission to this end. Samples have been collected and sent to the Commission for examination, and they have sent warnings to grocers, and sales of adulterated goods stopped. The hardest thing in this line we have to contend with is the man without a name or a place of business, who goes from house to house and makes his sales.

Another direction in which the Association has made advance is in the facilities for exhibiting honey and the bee-keeping industry at our State Fair. We have made a gain from year to year in this exhibit until it is one of the finest at the fair.

There was much interest developed at the meeting in regard to co-operation in the bee-keeping industry. Two papers were read, and a committee appointed, of which Walter R. Ansell was made chairman, to further the interests of bee-keepers in this direction. Any one interested in this matter is invited to communicate with the chairman of this committee.

The officers elected for the coming year are: President, E. K. Jaques; 1st Vice-President, S. La Mont; 2d Vice-President, Walter R. Ansell; 3d Vice-President, John Doll; Secretary, Mrs. W. S. Wingate, of Richfield; Treasurer, L. D. Leonard; Executive Committee, Wm. Russell and Wm. MacCuen.

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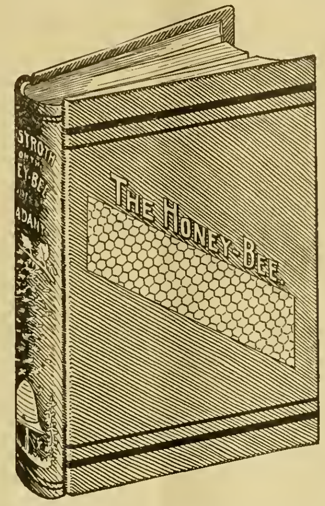
Revised by Dadant—Latest Edition.

This is one of the standard books on bee-culture, and ought to be in the library of every bee-keeper. It is bound substantially in cloth, and contains over 500 pages, being revised by those large, practical bee-keepers, so well-known to all the readers of the American Bee Journal—Chas. Dadant & Son. Each subject is clearly and thoroly explained, so that by following the instructions of this book one cannot fail to be wonderfully helped on the way to success with bees.



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Forty Years Among the Bees, by Dr. C. C. Miller.—This book contains 328 pages, is bound in handsome cloth, with gold letters and design; it is printed on best book-paper, and illustrated with 112 beautiful original half-tone pictures, taken by Dr. Miller himself. It is unique in this regard. The first few pages are devoted to an interesting biographical sketch of Dr. Miller, telling how he happened to get into bee-keeping. Seventeen years ago he wrote a small book, called "A Year Among the Bees," but that little work has been out of print for a number of years. While some of the matter used in the former book is found in the new one, it all reads like a good new story of successful bee-keeping by one of the masters, and shows in minutest detail just how Dr. Miller does things with bees. Price, $1.00.

Bee-Keeper's Guide, or Manual of the Apiary, by Prof. A. J. Cook, of Pomona College, California. This book is not only instructive and helpful as a guide in bee-keeping, but is interesting and thoroughly practical and scientific. It contains a full delineation of the anatomy and physiology of bees. 544 pages. 295 illustrations. Bound in cloth. 19th thousand. Price, $1.20.

Langstroth on the Honey-Bee, revised by Dadant.—This classic in bee-culture has been entirely re-written, and is fully illustrated. It treats of everything relating to bees and bee-keeping. No apiarian library is complete without this standard work by Rev. L. L. Langstroth—the Father of American Bee-Culture. It has 520 pages, bound in cloth. Price, $1.20.

A B C of Bee-Culture, by A. I. & E. R. Root. — A cyclopedia of over 500 pages, describing everything pertaining to the care of the honey-bees. Contains about 400 engravings. It was written especially for beginners. Bound in cloth. Price, $1.20

Scientific Queen-Rearing, as Practically Applied, by G. M. Doolittle.—A method by which the very best of queen-bees are reared in perfect accord with Nature's way. Bound in cloth and illustrated. Price, $1.00; in leatherette binding, 60 cents.

Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—It is nicely illustrated, contains 160 pages. Price, in cloth, 75 cents; in paper, 50 cents.

Advanced Bee-Culture, Its Methods and Management, by W. Z. Hutchinson.—The author of this work is a practical and entertaining writer. You should read his book; 90 pages; bound in paper, and illustrated. Price, 50 cents.

Bienen-Kultur, by Thomas G. Newman. —This is a German translation of the principal portion of the book called "Bees and Honey." 100-page pamphlet. Price, 25 cents.

Apiary Register, by Thomas G. Newman.—Devotes two pages to a colony. Leather binding. Price, for 50 colonies, $1.00.

Dr. Howard's Book on Foul Brood. —Gives the McEvoy Treatment and reviews the experiments of others. Price, 25 cents.

Winter Problem in Bee-Keeping, by G. R. Pierce.—Result of 25 years' experience. Price, 30 cents.

Foul Brood Treatment, by Prof. F. R. Cheshire.—Its Cause and Prevention. 10 cts.

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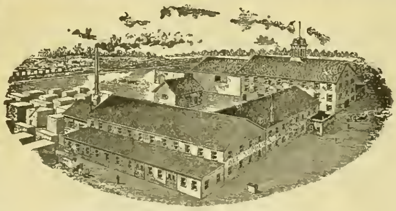

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CONVENTION NOTICES.

New York.—The annual meeting of the Oswego County Bee-Keepers' Association, will be held at Oswego, N.Y., Tuesday, Jan. 12, 1904. N. E. France, General Manager of the National Bee-Keepers' Association, will be present and address the meeting. All persons interested in bees are cordially invited to be present.

CHAS. B. ALLEN, Sec.
Central Square, N. Y.

Minnesota.—The annual meeting of the Southeastern Minnesota and Western Wisconsin Bee-Keepers' Association will meet at Winona, Minn., at the Court House, in the County Commissioners' rooms, on Tuesday, Jan. 19 (and 20), 1904. A full attendance of the members, their wives and friends, is invited to this, our annual meet. All bee-keepers everywhere are cordially invited to attend.

W. K. BATES, Pres.
Stockton, Minn.

New York.—Mr. N. E. France, of Platteville, Wis., General Manager of the National Bee-Keepers' Association, has been secured by the Bureau of Farmers' Institutes to speak at a series of Bee-Keepers' Institutes in connection with the local bee-keepers' societies as follows: Canandaigua, Jan. 6 and 7; Romulus, Jan. 8; Cortland, Jan. 9; Auburn, Jan. 11; Oswego, Jan. 12; Amsterdam, Jan. 13; Syracuse, Jan. 14 and 15. The meeting on the 15th will be that of the New York State Association of Bee-Keepers' Societies.

C. B. HOWARD, Sec.
Romulus, N. Y.

California.—The fourteenth annual convention of the California State Bee-Keepers' Association will be held in the Assembly Room of the Chamber of Commerce, at Los Angeles, Jan. 4 and 5, 1904. The convention will be called to order at 1:30 p.m., Jan. 4th. If you cannot be present send $1.00 for annual dues and be members of both the State and National Associations. When you buy your railroad ticket be sure and ask the railroad agent for a receipt, and if 50 persons in attendance have receipts we can get return tickets for ⅓ fare.

J. F. McINTYRE, Sec.
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The rapid expansion of our business has driven us out, and on January 1st we will be located at 51 WALNUT STREET. This forced change will remove us only half a block from our old home, but there we will have four floors, with increased facilities, and a TREMENDOUS NEW STOCK OF BEE-SUPPLIES.

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I can sell you a White Glass Honey-Jar, holding 15 ounces of honey, at $4.00 per gross. Also the standard square one-pound Jar at $4.50 per gross. Sample of either Jar by mail on receipt of 10 cents for postage.

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25,000 lbs. of the very best Extracted Honey for sale in new cans at 6½ cents per lb. for the lot. Also 3,000 lbs. of A No. 1 white comb honey in 4x5 sections at 13 cts. per lb.

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REMOVAL NOTICE.

We wish to advise our friends that on and after Jan. 1st we shall be located in our new 3-story building, **521 Monroe Street**, where we shall keep on hand at all times the largest stock of

Poultry and Bee-Keepers' Supplies in the West.

Remember, we handle **ROOT'S GOODS** exclusively, and with the low freight rates, and **the 4 percent discount** which we offer during December, enables Toledo to excel all other shipping points. Thanking you for past favors, and soliciting a continuance of the same, we remain,

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Complete stock for 1904 now on hand. Freight-rates from Cincinnati are the lowest. Prompt service is what I practice. Satisfaction guaranteed. Langstroth Portico Hives and Standard Honey-Jars at lowest prices.

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Book orders for Golden Italians, Red Clover and Carniolan Queens; for prices refer to my catalog.

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HONEY AND BEESWAX

MARKET QUOTATIONS

CHICAGO, Dec. 7.—At this season of the year there is not much trade in honey, retailers having laid in their stock for the holidays. Fancy comb honey for the Christmas trade has brought 13½c; No. 1 grades, 12½@13c; amber, 9@10c. Extracted white, brings 6@7c; amber, 5@6c. All extracted honey is sold on its flavor, quality, kind and style of package. Beeswsx, 28@30c. R. A. BURNETT & CO.

PHILADELPHIA, Dec. 10.—Large lots of comb honey being offered from States that were not supposed to have much stock. Bee-men, as usual, wake up now to the fact that they want to sell their comb honey and push it on the market, thus breaking the price. If they would only offer their honey in September, they would get more for it and it would be better for the producer and dealer. We quote fancy white, 14@16c; No. 1, 12@14c; buckwheat, 12c. Fancy extracted, 8c; amber, 6@7c. We are producers of honey, and do not handle on commission.
WM. A. SELSER.

ALBANY, N. Y., Dec. 15.—Market very dull, and lower since the cold weather. Quotations have to be shaded, and concessions made to effect any quantity sales. H. R. WRIGHT.

CINCINNATI, Nov. 20.—The demand for comb honey is slower now than it was six weeks ago, owing to the enormous quantities offered on all sides. Fancy comb is sold in single case lots at 14c. The supply of extracted honey is big, although the demand is good. We are selling amber extracted in barrels at 5¾@6½c. White clover, in barrels and cans, 7½@8½c, according to quality. Beeswax, 30c.
THE FRED W. MUTH CO.

BUFFALO, N. Y., Oct. 11.—The demand for white comb honey is better than it was. The trade is particular and wants only very white, clean stock. If the wax is yellow from travel-stain it does not sell well, and price has to be cut. Fancy white comb, 14@15c; A No. 1, 13½@14c; No. 1, 13@13½c; No. 2, 12@12½c; No. 3, 11@12c; No. 1 dark comb, 11@12c; No. 2, 10@11c. White extracted, 6½@7c; amber, 6@6½c; dark, 5½@6c. Beeswax, 28@30c.
W. C. TOWNSEND.

BOSTON, Dec. 21.—The demand for honey continues good, with an ample supply of comb, and a light supply of extracted. We quote our market as follows: Fancy white comb, 16@17c; No. 1, 14@15c; and practically no No. 2 to offer. Extracted, 7@8c, as to quality.
BLAKE, SCOTT & LEE.

KANSAS CITY, Dec. 18.—Since our last quotations there have been two cars of western comb honey put on our market, and same is being sold (without any good reason,) at prices not justified by market conditions. Fancy white comb, 24-section cases, $2.65; No. 1, $2.50; No. 2, $2.40 .Extracted, white, per lb., 7@7½c; amber, 6@6½c. Beeswax, 25@30c.
C. C. CLEMONS & CO.

CINCINNATI, Dec. 18.—The market on comb honey has weakened, as the supply has been larger than the demand. Fancy water-white 14c; off grades, lower. Extracted, amber, in barrels, 5¼@5¾c; in 60-lb. cans, ½c more; alfalfa, water-white, 6@6½c; fancy white clover, 7@8c. Beeswax, good demand; 30c for nice.
C. H. W. WEBER.

NEW YORK, Dec. 4.—Comb honey is arriving in sufficient quantities to supply the demand, and, as to the quality, most of the white honey seems to be off color, more or less. We quote fancy white at 14c; No. 1 at 13c; amber, 11@12c; and buckwheat, 10c. Extracted, light amber, at 6c; white, 6½c; Southern, 55@60c per gallon; buckwheat, 5½c. Beeswax, 28@29c.
HILDRETH & SEGELKEN.

SAN FRANCISCO, Oct. 21.—White comb, 1-lb. frames, 13@14 cents; amber, 9@11c. Extracted, white, 5¾@6¼c; light amber, 5@5½c; amber, 4½@5c; dark amber, 4@4½c. Beeswax, good to choice, light, 27½@29c; dark, 25@26c.

Market is more quiet than for several weeks preceding, but is fairly steady as to value. Spot stocks and offerings of both comb and extracted are mainly of amber grades, while most urgent inquiry is principally for water-white, the latter being the only kind meeting with much competitive bidding from buyers. Recent arrivals of honey included a lot of 121 cases from the Hawaiian Islands. The bees of the Islands feed mainly on sugar.

20,000 Pounds

White Extracted Alfalfa HONEY FOR SALE.
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The enormous charges specialists extort for treating the eyes can be saved by a simple but certain home cure which has not only saved dollars for thousands, but saved eye sight of inestimable value. The

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removes cataracts without the knife, at home, cures granulated lids, floating specks, scums, growths, sore and inflamed eyes, failing sight, or we refund your money. Send full description of your case and ask for our free booklet and advice.

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ALL IN 60-POUND TIN CANS.

Alfalfa Honey

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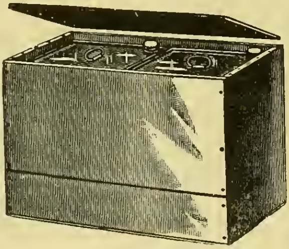

Basswood Honey

This is the well-known light-colored honey gathered from the rich, nectar-laden basswood blossoms. It has a stronger flavor than Alfalfa, and is preferred by those who like a distinct flavor in their honey.

Our honey is put up in tin cans holding 60 pounds of honey each. These cans are shipped in wooden-boxes, and should arrive safely. We have nothing but PURE BEES' HONEY to offer, and so guarantee it. **Cash must accompany each order.** All prices are f.o.b. Chicago.

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One 60-lb. Can @8c..............$ 4.80
Two 60-lb. Cans (in 1 box) @7½c 9.00
(Larger quantities at the 7½c price.)

Prices of Basswood Honey:
One 60-lb. Can @9c.............$ 5.40
Two 60-lb. Cans (in 1 box) @8c.... 9.60
(Larger quantities at the 8c price.)

A sample of either Alfalfa or Basswood honey will be mailed on receipt of 10 cents; samples of both kinds for 16 cents. (Stamps accepted.)

BEESWAX WANTED—We are paying 28 cents cash or 30 cents in trade for pure average beeswax delivered in Chicago (or Medina, Ohio.

HONEY-JARS—Don't forget to get our prices on all sorts of honey-packages.

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